Databoks Offsite Backup Server v5.0

User's Guide

Version 5.0.1.0
Oct 2005

Databoks Offsite Backup Server v5.0

User's Guide

Copyright Notice

© Lebshama Company Limited 2005. All rights reserved.

Author: Scherring Chong

The use and copying of this product is subject to a license agreement. Any other use is prohibited. No part of this publication may be reproduced, transmitted, transcribed, stored in a retrieval system or translated into any language in any form by any means without the prior written consent of Lebshama Company Limited. Information in this manual is subject to change without notice and does not represent a commitment on the part of the vendor. Lebshama does not warrant that this document is error free. If you find any errors in this document, please report to Lebshama Company Limited in writing.

This product includes software developed by the Apache Software Foundation (http://www.apache.org/).

Trademarks

Microsoft, Windows, Microsoft Exchange Server and Microsoft SQL Server are registered trademarks of Microsoft Corporation.
Sun, Solaris, SPARC, Java and Java Runtime Environment are registered trademarks of Sun Microsystems Inc.
Oracle, Oracle 8i, Oracle 9i are registered trademarks of Oracle Corporation.
Lotus, Domino, Notes are registered trademark of IBM Corporation.
Red Hat is registered trademark of Red Hat, Inc.
Linux is registered trademark of Linus Torvalds.
Apple and Mac OS X are registered trademarks of Apple Computer, Inc.

All other product names are registered trademarks of their respective owners.

Table of Content

1 Overview 6
1.1 Benefits 6
1.2 Features 6
1.3 Security 8
1.4 System Requirements 8
2 System Configuration 9
2.1 Installation of DataboksOBM 9
2.2 Upgrade of DataboksOBM 12
2.3 Un-installation of DataboksOBM 16
3 Using DataboksOBM 19
3.1 System Tray Launcher 19
3.2 Logon Dialog 19
3.3 Language Selection 20
3.4 User Profile 21
3.5 Backup Logs 23
4 Setting up backup set 25
4.1 Backup Set Type 25
4.2 Backup Source 26
4.3 Backup Schedule 27
4.4 In-File Delta 28
4.5 Backup Filter 29
4.6 Pre/Post-Backup Command 31
4.7 Encryption 33
4.8 Retention Policy 34
4.9 Network Mapped Drive 35
4.10 Local Copy 36
4.11 Multiple Computers using one backup account 40
4.12 Transfer Block Size 41
4.13 Follow Symbolic Link (Linux/Unix/Mac only) 42
5 Backing up files 44
5.1 How files are backed up 44
5.2 Backup files directly to the backup server 45
5.3 Backup files to removable hard disk (seed loading) 48
6 Restoring files 51
6.1 Restore backup files directly from backup server 51

6.2 Restore backup files from removable hard disk 57
6.3 Restrict restoring files by IP addresses 61
7 In-File Delta Technology 63
7.1 Overview 63
7.2 Block Size 64
7.3 Maximum Number of Delta 65
7.4 Minimum File Size 65
7.5 Delta Ratio 65
7.6 Temporary Directory 65
8 Backup/Restore Oracle 8i/9i 67
8.1 Requirements 67
8.2 Overview 68
8.3 How to backup an Oracle Database 69
8.4 How to restore an Oracle Database 73
9 Backup/Restore Microsoft SQL Server 7.0 / 2000 76
9.1 Requirements 76
9.2 Overview 76
9.3 How to backup Microsoft SQL Server database(s) 77
9.4 How to restore Microsoft SQL Server database(s) 80
10 Backup/Restore Lotus Domino / Notes 87
10.1 Requirements 87
10.2 Overview 89
10.3 How to backup Lotus Domino / Notes database(s) / file(s) 89
10.4 How to restore Lotus Domino / Notes database(s) / file(s) 93
11 Backup/Restore Microsoft Exchange Server 2000 / 2003 95
11.1 Requirements 95
11.2 Overview 95
11.3 How to backup Microsoft Exchange Server 2000 / 2003 97
11.4 How to restore Microsoft Exchange Server 2000 / 2003 101
12 Backup/Restore MySQL Server 104
12.1 Requirements 104
12.2 Overview 104
12.3 How to backup MySQL server 105
12.4 How to restore MySQL server 109
13 Email Reporting 110
13.1 New User Report 110
13.2 Forgot Password Report 111
13.3 Backup Job Report 112
13.4 Setting Change Report 115

13.5 Inactive User Reminder 116
14 Web Features 117
14.1 Install DataboksOBM 117
14.2 Update User Profile 117
14.3 Request Forgotten Password 118
14.4 Delete/Undelete Backup Files 118
14.5 Review Backup Jobs 119
14.6 Review Storage Statistics 122
15 Further Information 123
15.1 FAQs 123
15.2 Contact Us 123

1 Overview

1.1 Benefits

- Backup of
  1. Microsoft Exchange Server 2000 / 2003
  2. Microsoft SQL Server 7.0 / 2000
  3. Lotus Domino/Notes 5.0 or above
  4. Oracle 8i or above
  5. MySQL 4.x or above
  6. Windows System State
  7. Common files (e.g. *.doc, *.xls)
- Support of backing up only changes within a file (In-file Delta)
- Support of backing up of open files on Windows XP/2003 (Volume Shadow Copy)
- Easy to use, deploy and maintain
- Fully automated. No administrative tasks required.

1.2 Features

- (new) In-File Delta backup (i.e. backing up only changes within files)
- (new) Volume Shadow Copy backup (i.e. backing up files even when they are exclusively open, e.g. outlook.pst)
- (new) Bandwidth Throttling at backup account level (new) In-File Delta backup (i.e. backing up only changes within files)
- (new) Off-line backup mode and logout backup reminder
- (new) Real time backup server replication allows backup server to be easily backup
- (OEM version only) All references to Databoks can be removed or branded to your own company name, address, phone and email
- (OEM version only) Allow backup trial accounts to be created on the backup server (with max. 500MB backup quota)
- (OEM version only) Create branded installer for backup client software. No special setup is required to offer free trial subscriptions to potential users
- Customizable backup schedule allows backup to be scheduled at any time
- Compress and encrypt data automatically before sending them to the server (server stores only encrypted data)
- Increment backup strategy ensures that only new or updated files (or changes with last backup file) are sent to backup server
- Support both full backup (database backup) and incremental backup (transaction log backup) for Microsoft SQL Server 7.0/2000, Microsoft Exchange Server 2000/2003, Lotus Domino/Notes 5.0 and Oracle 8i or above
- Can integrate with external "Open File Manager" to provide open file backup support to all open files
- Access backup data anytime, anywhere by using a browser
- Comprehensive backup report lists all files being backup. Backup report will be delivered to user automatically via email when each backup job completed.
- Backup data are CRC validated before they are stored on server.
- Customizable data retention policy allows user to access files even when they have been deleted.
- Select files to be backed up easily by using backup filter, e.g. selecting all *.doc and *.xls in your computer in a single operation

- Run any custom OS commands before/after a backup job.
- Run on Windows, Mac OS X, Linux, NetWare, Unix and all other platforms supporting a Jave2 Virtual Machine.
- LiveUpdate allows patches to be deployed to hundreds of clients easily
- System activity report, showing all backup system information, will be delivered to system administrator via email everyday.

1.3 Security

- Point-to-point SSL communication between server and client
- Support HTTP/HTTPS Proxy and Socks v4/v5 firewall
- Data are 128-bit encrypted when stored on backup server
- Choice of different encryption algorithms, e.g. Twofish, Triple DES, Advanced Encryption Standard (AES)
- Choice of different encryption modes, e.g. Electronic Cook Book (ECB) and Cipher Block Chaining (CBC)
- An random initializing vector, salt and iteration count will be generated by the software automatically for each file when encrypting your data
- Each backup user can restrict online access to his files to his pre-defined list of IP addresses

1.4 System Requirements

- **Operating System :**
  1. Windows 95 / 98 / ME / NT / 2000 / XP / 2003
  2. Linux Kernel 2.2 or above * (e.g. RedHat Linux 6.x or above)
  3. Solaris 2.x or above
  4. Mac OS X
  5. NetWare 5.1 or above
  6. all other operating systems that supports Java2 Runtime Environment 1.3.1 or above
- **Memory :** 128MB (minimum), 256MB (recommended)
- **Disk Space :** 100MB
- **Network Protocol :** TCP/IP (http/https)

* Standard C++ libraries for backwards compatibility compiler (compat-libstdc++-x.x-y.y.y.y.i386.rpm) must be installed if you are not using a Linux 2.2 kernel. These libraries are required to run all Java applications.

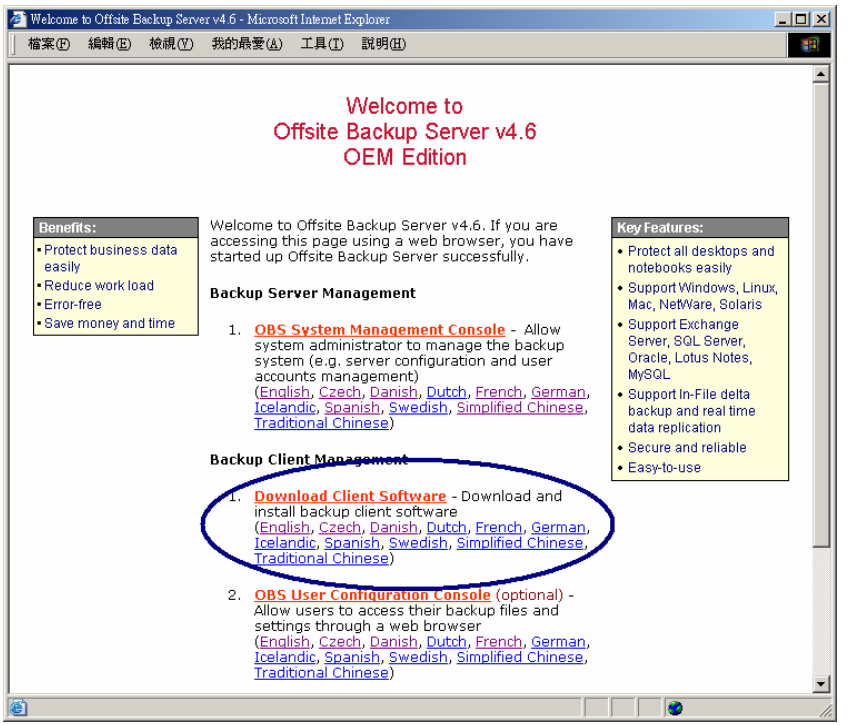
2 System Configuration

Before you can start backing up data to Databoks Offsite Backup Server, you need to install DataboksOBM (DataboksOBM) onto your computer.

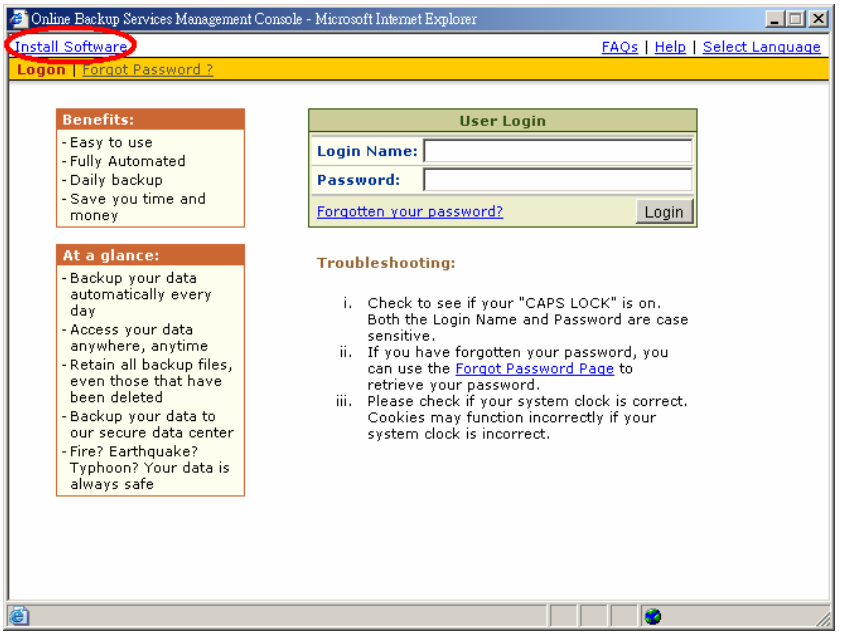
2.1 Installation of DataboksOBM

Please follow the instructions below to install DataboksOBM onto your computer.

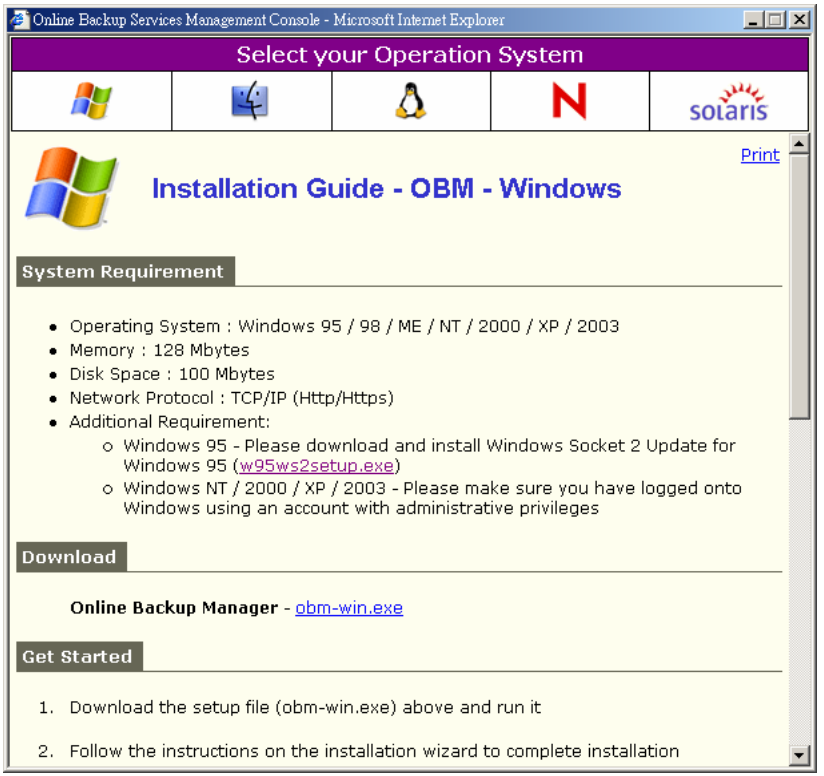
i. Click the one of the language links under the [Download Client Software] section


Welcome to Offsite Backup Server v4.6 - Microsoft Internet Explorer
檔案(F) 編輯(E) 檢視(V) 我的最愛(A) 工具(T) 說明(H)
Welcome to
Offsite Backup Server v4.6
OEM Edition
Benefits:
• Protect business data easily
• Reduce work load
• Error-free
• Save money and time
Welcome to Offsite Backup Server v4.6. If you are accessing this page using a web browser, you have started up Offsite Backup Server successfully.
Backup Server Management
1. OBS System Management Console - Allow system administrator to manage the backup system (e.g. server configuration and user accounts management)
(English, Czech, Danish, Dutch, French, German, Icelandic, Spanish, Swedish, Simplified Chinese, Traditional Chinese)
Backup Client Management
1. Download Client Software - Download and install backup client software
(English, Czech, Danish, Dutch, French, German, Icelandic, Spanish, Swedish, Simplified Chinese, Traditional Chinese)
2. OBS User Configuration Console (optional) - Allow users to access their backup files and settings through a web browser
(English, Czech, Danish, Dutch, French, German, Icelandic, Spanish, Swedish, Simplified Chinese, Traditional Chinese)
Key Features:
• Protect all desktops and notebooks easily
• Support Windows, Linux, Mac, NetWare, Solaris
• Support Exchange Server, SQL Server, Oracle, Lotus Notes, MySQL
• Support In-File delta backup and real time data replication
• Secure and reliable
• Easy-to-use

Or click the [Install Software] link available at the top of the [Online Backup Services Management Console]


Online Backup Services Management Console - Microsoft Internet Explorer
Install Software
FAQs | Help | Select Language
Logon | Forgot Password ?
Benefits:
- Easy to use
- Fully Automated
- Daily backup
- Save you time and money
At a glance:
- Backup your data automatically every day
- Access your data anywhere, anytime
- Retain all backup files, even those that have been deleted
- Backup your data to our secure data center
- Fire? Earthquake? Typhoon? Your data is always safe
User Login
Login Name:
Password:
Forgotten your password?
Login
Troubleshooting:
i. Check to see if your "CAPS LOCK" is on. Both the Login Name and Password are case sensitive.
ii. If you have forgotten your password, you can use the Forgot Password Page to retrieve your password.
iii. Please check if your system clock is correct. Cookies may function incorrectly if your system clock is incorrect.

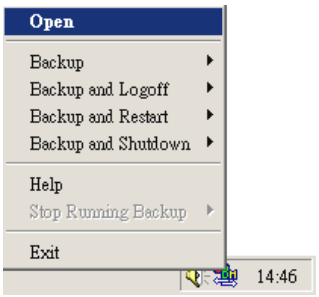
ii. Select the operating system to which you want to install DataboksOBM


Online Backup Services Management Console - Microsoft Internet Explorer
Select your Operation System
solaris
Print
Installation Guide - OBM - Windows
System Requirement
Operating System : Windows 95 / 98 / ME / NT / 2000 / XP / 2003
Memory : 128 Mbytes
Disk Space : 100 Mbytes
Network Protocol : TCP/IP (Http/Https)
Additional Requirement:
Windows 95 - Please download and install Windows Socket 2 Update for Windows 95 (w95ws2setup.exe)
Windows NT / 2000 / XP / 2003 - Please make sure you have logged onto Windows using an account with administrative privileges
Download
Online Backup Manager - obm-win.exe
Get Started
1. Download the setup file (obm-win.exe) above and run it
2. Follow the instructions on the installation wizard to complete installation

iii. Follow the instructions on the installation guide to complete DataboksOBM installation

Notes on Windows Installation

A quick launcher is now installed in the system tray (next to your system clock). To open DataboksOBM, just right click the quick launcher icon and choose [Open].

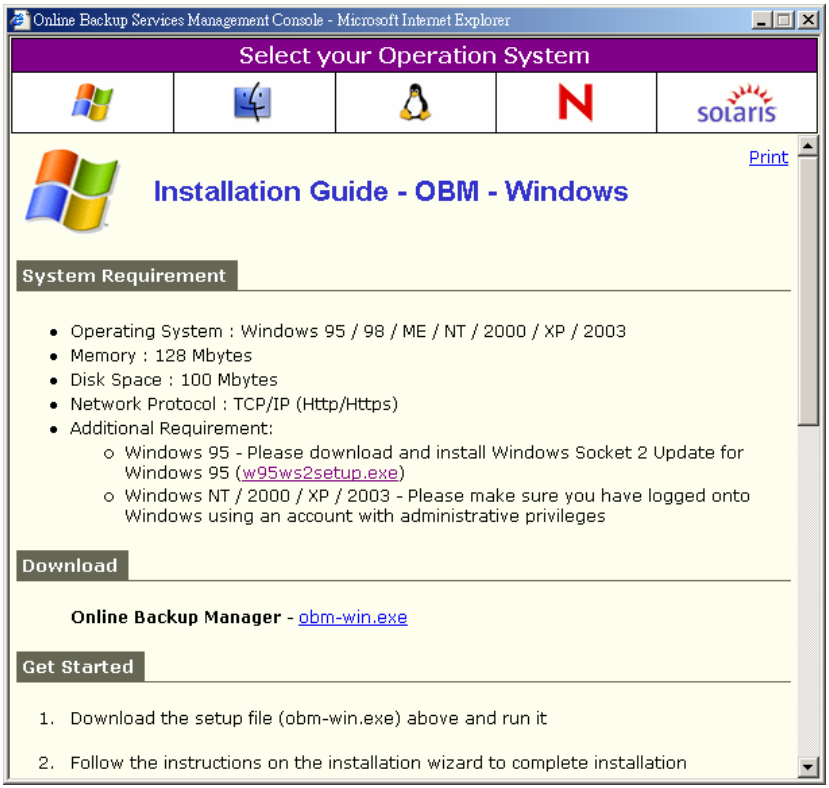


2.2 Upgrade of DataboksOBM

This section describes the software upgrade instructions required to upgrade DataboksOBM to the latest release.

Upgrade instructions of DataboksOBM on Windows

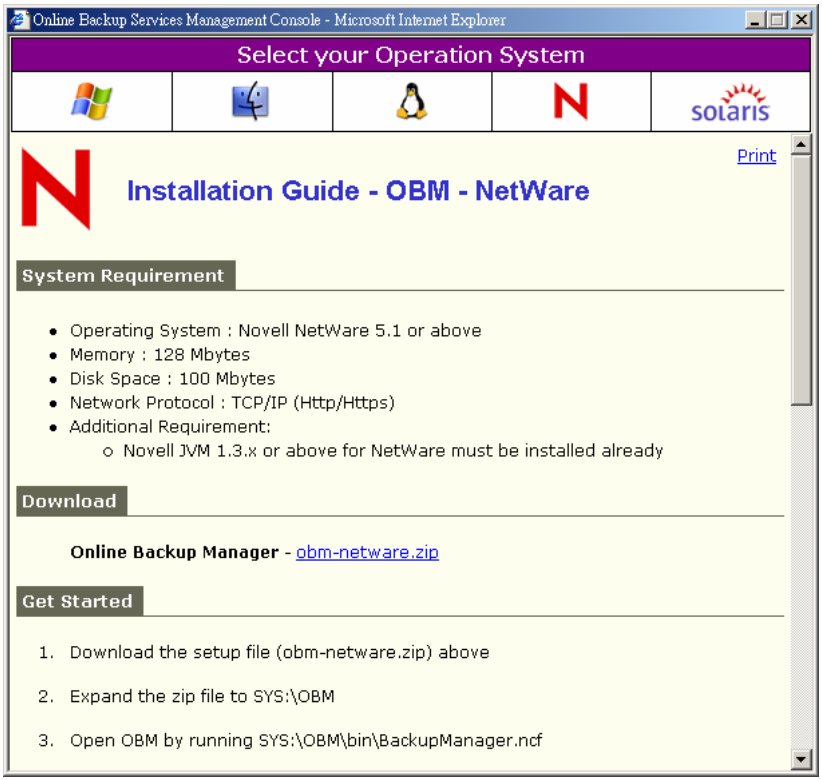
Download the latest installer (obm-win.exe) from the web installation guide and install it over existing installation of DataboksOBM. It will upgrade the DataboksOBM to the latest version.


Online Backup Services Management Console - Microsoft Internet Explorer
Select your Operation System
solaris
Print
Installation Guide - OBM - Windows
System Requirement
Operating System : Windows 95 / 98 / ME / NT / 2000 / XP / 2003
Memory : 128 Mbytes
Disk Space : 100 Mbytes
Network Protocol : TCP/IP (Http/Https)
Additional Requirement:
Windows 95 - Please download and install Windows Socket 2 Update for Windows 95 (w95ws2setup.exe)
Windows NT / 2000 / XP / 2003 - Please make sure you have logged onto Windows using an account with administrative privileges
Download
Online Backup Manager - obm-win.exe
Get Started
1. Download the setup file (obm-win.exe) above and run it
2. Follow the instructions on the installation wizard to complete installation

Notes:
You will only be prompted to reboot your computer if some files are locked and cannot be overwritten during upgrade.

Upgrade instructions of DataboksOBM on Netware

a. Download the latest release bundle (obm-netware.zip) from the web installation guide.


Online Backup Services Management Console - Microsoft Internet Explorer
Select your Operation System
solaris
Print
Installation Guide - OBM - NetWare
System Requirement
Operating System : Novell NetWare 5.1 or above
Memory : 128 Mbytes
Disk Space : 100 Mbytes
Network Protocol : TCP/IP (Http/Https)
Additional Requirement:
Novell JVM 1.3.x or above for NetWare must be installed already
Download
Online Backup Manager - obm-netware.zip
Get Started
1. Download the setup file (obm-netware.zip) above
2. Expand the zip file to SYS:\OBM
3. Open OBM by running SYS:\OBM\bin\BackupManager.ncf

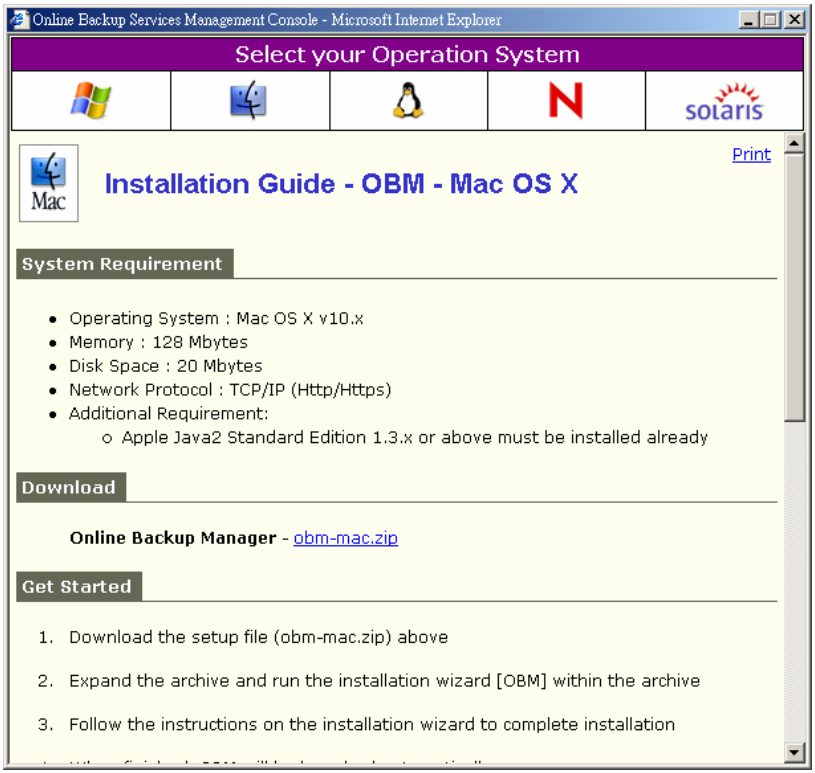
b. Backup existing installation by renaming SYS:\OBM to SYS:\OBM.bak

c. Restarting backup scheduler by running SYS:\OBM\bin\Scheduler.ncf

d. You can then open DataboksOBM by running SYS:\OBM\bin\BackupManager.ncf

Upgrade instructions of DataboksOBM on Mac OS X

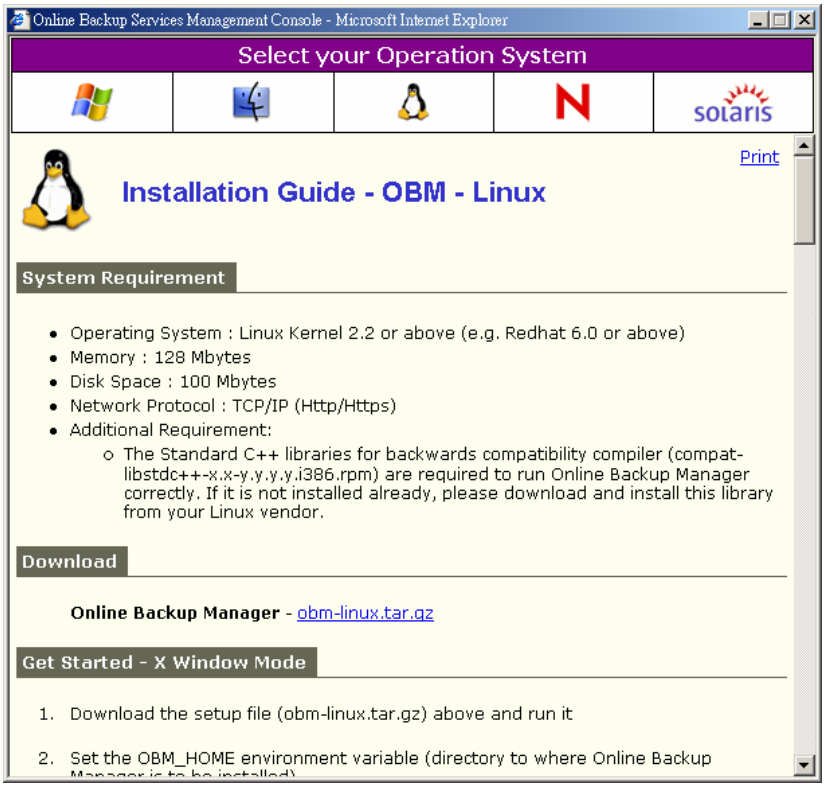
a. Download the latest release bundle (obm-mac.zip) from the web installation guide.


Online Backup Services Management Console - Microsoft Internet Explorer
Select your Operation System
solaris
Print
Mac
Installation Guide - OBM - Mac OS X
System Requirement
Operating System : Mac OS X v10.x
Memory : 128 Mbytes
Disk Space : 20 Mbytes
Network Protocol : TCP/IP (Http/Https)
Additional Requirement:
Apple Java2 Standard Edition 1.3.x or above must be installed already
Download
Online Backup Manager - obm-mac.zip
Get Started
1. Download the setup file (obm-mac.zip) above
2. Expand the archive and run the installation wizard [OBM] within the archive
3. Follow the instructions on the installation wizard to complete installation

b. Expand the zip archive and run the DataboksOBM installer inside the archive

Upgrade instructions of DataboksOBM on Linux

a. Download the latest release bundle (obm-linux.tar.gz) from the web installation guide


Online Backup Services Management Console - Microsoft Internet Explorer
Select your Operation System
solaris
Print
Installation Guide - OBM - Linux
System Requirement
Operating System : Linux Kernel 2.2 or above (e.g. Redhat 6.0 or above)
Memory : 128 Mbytes
Disk Space : 100 Mbytes
Network Protocol : TCP/IP (Http/Https)
Additional Requirement:
The Standard C++ libraries for backwards compatibility compiler (compat-libstdc++-x.x-y.y.y.y.i386.rpm) are required to run Online Backup Manager correctly. If it is not installed already, please download and install this library from your Linux vendor.
Download
Online Backup Manager - obm-linux.tar.gz
Get Started - X Window Mode
1. Download the setup file (obm-linux.tar.gz) above and run it
2. Set the OBM_HOME environment variable (directory to where Online Backup

b. Stop running backup scheduler by running

```
# touch $OBM_HOME/ipc/Scheduler/stop
```

c. Backup existing installation by renaming $OBM_HOME (default directory is /usr/local/obm) to $OBM_HOME.bak

```
# mv /usr/local/obm /usr/local/obm.bak
```

d. Expand the new client software to $OBM_HOME

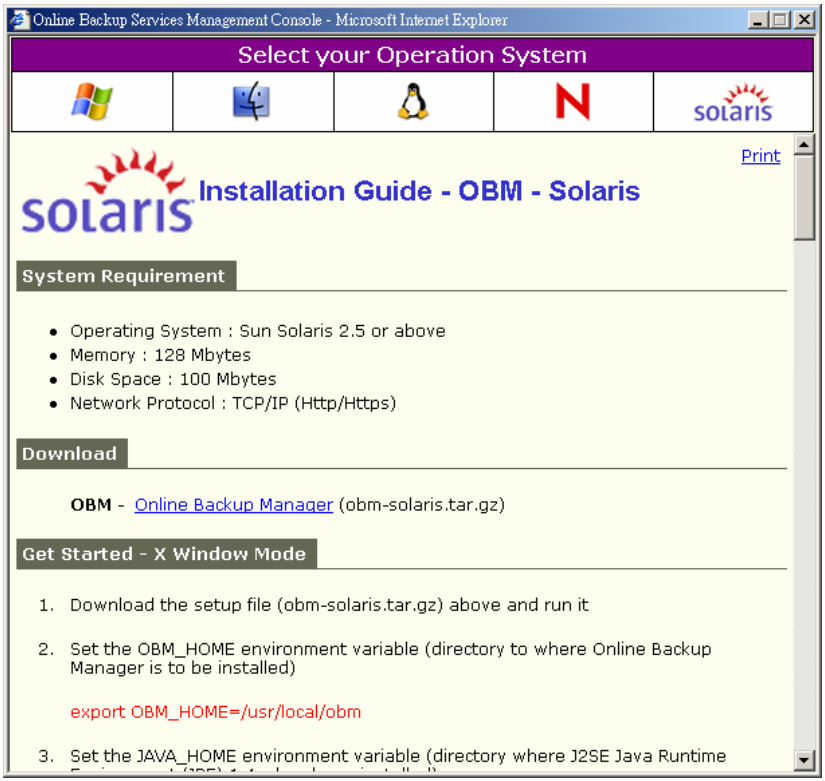
```
# cd $OBM_HOME
# tar xvfz obm-linux.tar.gz
```

e. Start backup scheduler by running $OBM_HOME\bin\Scheduler.sh

f. You can then open DataboksOBM by running $OBM_HOME\bin\BackupManager.sh

Upgrade instructions of DataboksOBM on Sun Solaris

a. Download the latest release bundle (obm-solaris.tar.gz) from the web installation guide


Online Backup Services Management Console - Microsoft Internet Explorer
Select your Operation System
solaris
Print
solaris
Installation Guide - OBM - Solaris
System Requirement
Operating System : Sun Solaris 2.5 or above
Memory : 128 Mbytes
Disk Space : 100 Mbytes
Network Protocol : TCP/IP (Http/Https)
Download
OBM - Online Backup Manager (obm-solaris.tar.gz)
Get Started - X Window Mode
1. Download the setup file (obm-solaris.tar.gz) above and run it
2. Set the OBM_HOME environment variable (directory to where Online Backup Manager is to be installed)
export OBM_HOME=/usr/local/obm
3. Set the JAVA_HOME environment variable (directory where J2SE Java Runtime

b. Stop running backup scheduler by running

```
# touch $OBM_HOME/ipc/Scheduler/stop
```

c. Backup existing installation by renaming $OBM_HOME (default directory is /usr/local/obm) to $OBM_HOME.bak

```
# mv /usr/local/obm /usr/local/obm.bak
```

d. Expand the new client software to $OBM_HOME

```
# cd $OBM_HOME
# tar xvfz obm-linux.tar.gz
```

e. Start backup scheduler by running $OBM_HOME\bin\Scheduler.sh

f. You can then open DataboksOBM by running $OBM_HOME\bin\BackupManager.sh

2.3 Un-installation of DataboksOBM

This section describes the steps required to uninstall DataboksOBM from your computer.

Uninstallation instructions of DataboksOBM on Windows

a. Open [Start] -> [Control Panel] -> [Add/Remove Programs]

b. Select [DataboksOBM] from the list and press the [Remove] button

Uninstallation instructions of DataboksOBM on Netware

a. Stop running backup scheduler by running

SYS:\> touch SYS:\OBM\ipc\Scheduler\stop

b. Remove all program files by removing the directory SYS:\OBM

c. Remove all backup settings by removing the directory SYS:\.OBM

Uninstallation instructions of DataboksOBM on Mac OS X

a. Stop running backup scheduler by running

SystemStarter DataboksOBM stop

b. Remove all program files by removing /Applications/OBM

rm –rf /Applications/OBM

c. Remove all backup setting by removing ~/.obm

rm –rf ~/.obm

d. Remove backup scheduler service from system startup by /System/Library/StartupItems/DataboksOBM

rm –rf /System/Library/StartupItems/DataboksOBM

Uninstallation instructions of DataboksOBM on Linux

a. Stop running backup scheduler by running

touch $OBM_HOME/ipc/Scheduler/stop

b. Remove all program files by removing $OBM_HOME

rm –rf $OBM_HOME

c. Remove all backup setting by removing ~/.obm

rm –rf ~/.obm

Uninstallation instructions of DataboksOBM on Sun Solaris

a. Stop running backup scheduler by running

```
# touch $OBM_HOME/ipc/Scheduler/stop
```

b. Remove all program files by removing $OBM_HOME

```
# rm –rf $OBM_HOME
```

c. Remove all backup setting by removing ~/.obm

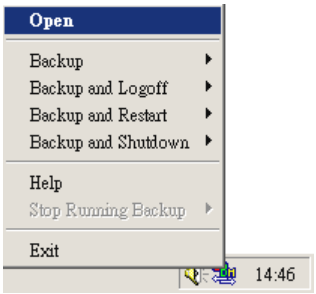
```
# rm –rf ~/.obm
```

3 Using DataboksOBM

This chapter will describe all features available in DataboksOBM and outline how you can use the features of DataboksOBM to meet various backup needs.

3.1 System Tray Launcher

After you have successfully installed DataboksOBM to your computer, an OBM icon will be added to the system tray area (next to your system clock) automatically.

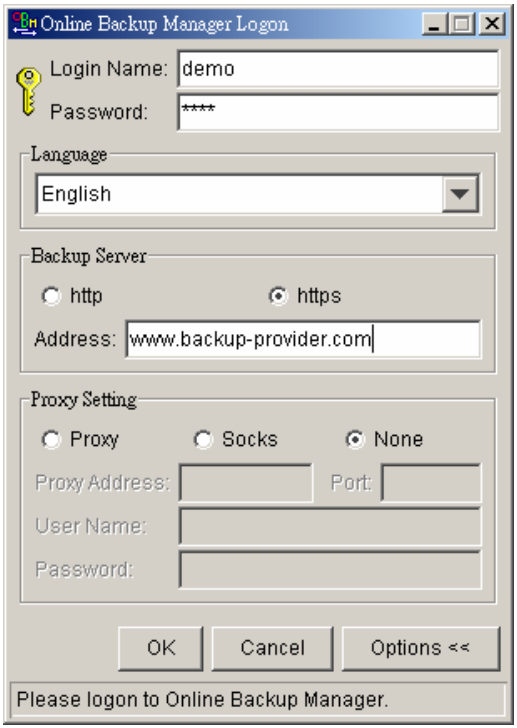


This icon is the entry point to DataboksOBM. Right clicking the icon will show a menu that provides the following functions:

Menu Item	What it does
Open	Run DataboksOBM
Backup	Run the backup set (or all backup sets) chosen in the sub-menu in background
Backup and Logoff	Run the backup set (or all backup sets) chosen in the sub-menu in background and logoff from Windows
Backup and Restart	Run the backup set (or all backup sets) chosen in the sub-menu in background and restart Windows
Backup and Shutdown	Run the backup set (or all backup sets) chosen in the sub-menu in background and shutdown this computer
Help	Show a help dialog
Stop running backup	Interrupt the running backup set (or all backup sets) chosen in the sub-menu
Exit	Close this system tray launcher application

3.2 Logon Dialog

Before you can use DataboksOBM, you have to be authenticated by the Databoks Offsite Backup Server first. The logon dialog shown below will check if you have the right to access DataboksOBM by submitting the username and password you provided to the backup server.



For secure communication, you can choose to communicate with Databoks Offsite Backup Server in SSL (Secure Socket Layer) by selecting the [https] option.

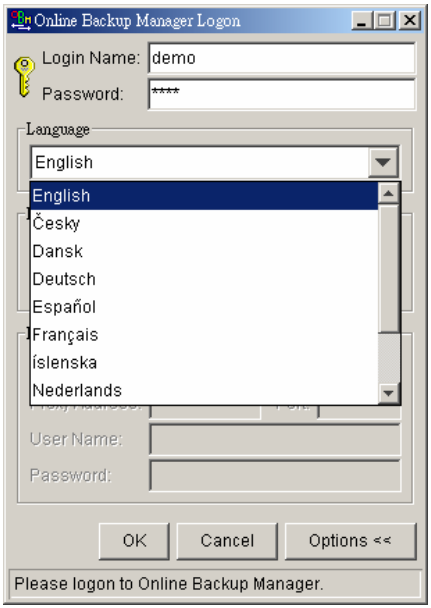
The [Address] field shows the Databoks Offsite Backup Server to which DataboksOBM will connect to authenticate your username and password. You can use either a resolvable host name (e.g. backup.your-domain.com) or an IP address (e.g. 192.168.1.1).

If the Databoks Offsite Backup Server is not accepting connection from the standard ports (Port 80 and 443 for http and https respectively), you can append a semi-colon ":" and your custom port number to the host name of the [Address] field (e.g. www.backup-provider.com:8080) to connect to the server using the custom port number (port 8080 in this case).

If you need to connect to the server through proxy, just enter your proxy setting in the [Proxy Setting] section. For [SOCKS] proxy, both v4 and v5 without user authentication are supported.

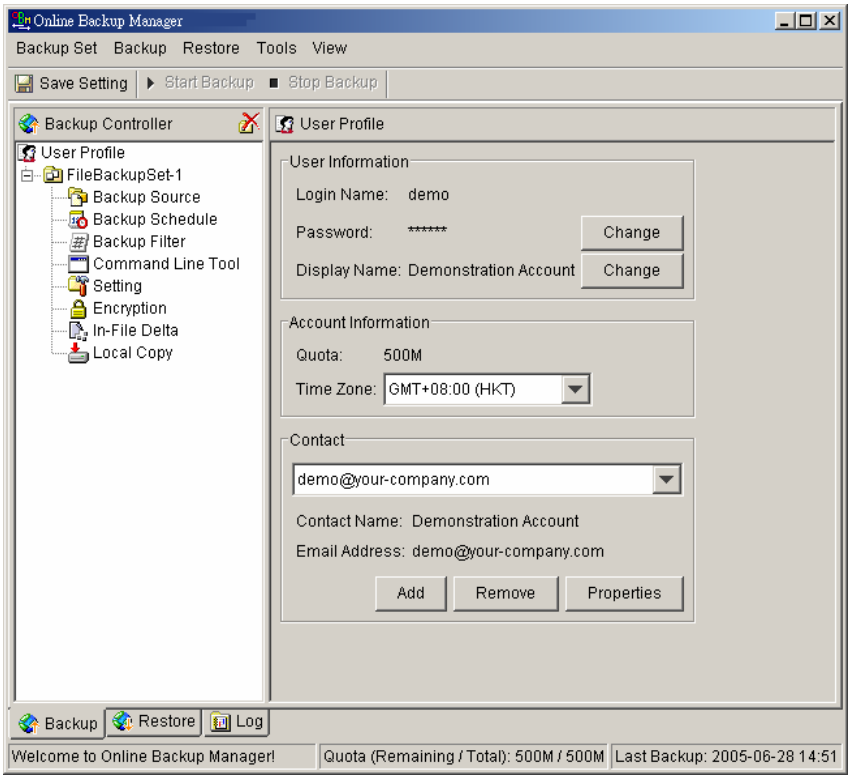
3.3 Language Selection

You can switch the language of the DataboksOBM user interface by choosing the desired language available from the [Language] drop down list. The languages available include English, Czech, Danish, German, Spanish, Icelandic, Dutch, Swedish, Traditional Chinese and Simplified Chinese.



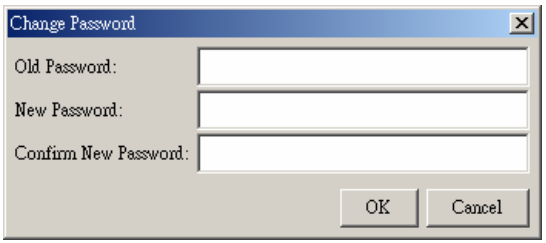
3.4 User Profile

After the backup server authenticates you successfully, DataboksOBM main window appears. You can then use DataboksOBM to update your user profile.

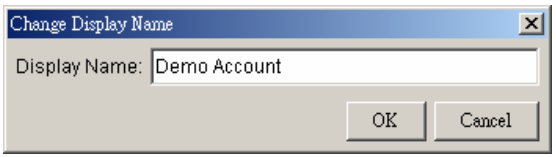


You can perform the following update to your user profile.

To change your [Password], press the [Change] button next to the password field. A Change Password dialog will appear. Enter your original password and new password into the text field of this dialog and press [OK].

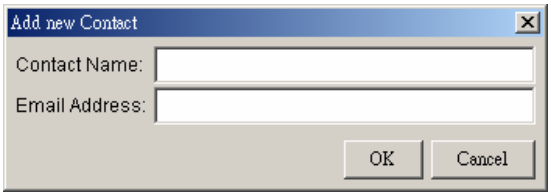


To change your [Display Name], press the [Change] button next to the display name field. A Change Display Name dialog will appear. Enter the new display name and press [OK].



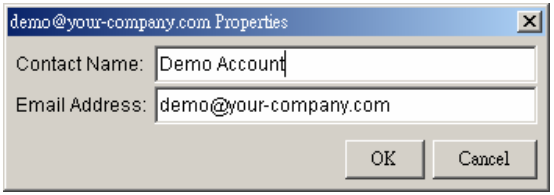
To change your [Time Zone], just select your time zone from the drop down list next to the time zone entry.

To add a new contact email to this account, press the [Add] button in the [Contact] section. A [Add New Contact] dialog will appear. Enter a name and an email address in the text field provided and then press the [OK] button.



To remove a contact email, select the email that is to be removed from the email list and press the [Remove] button. Press [OK] to confirm the removal.

To update a contact email, select the email that is to be updated from the email list and press the [Properties] button. A [Update Contact Property] dialog will appear. After you have made the changes that you want, press the [OK] button.



3.5 Backup Logs

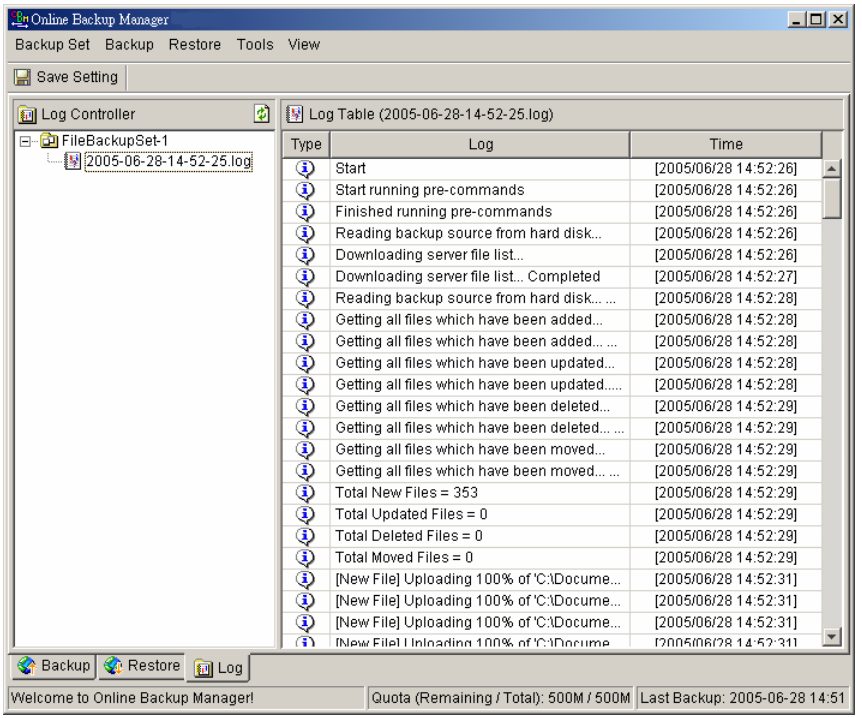
All backup activities are logged to backup activity log files. They are available for reviewing from DataboksOBM.

How to review backup activities?

You can review all your backup jobs by

i. Select the [Log] tab available at the bottom of DataboksOBM

ii. Select the Backup Job you want to review on the [Log Controller] panel


Online Backup Manager
Backup Set Backup Restore Tools View
Save Setting
Log Controller
FileBackupSet-1
2005-06-28-14-52-25.log
Log Table (2005-06-28-14-52-25.log)
Type Log Time
Start [2005/06/28 14:52:26]
Start running pre-commands [2005/06/28 14:52:26]
Finished running pre-commands [2005/06/28 14:52:26]
Reading backup source from hard disk... [2005/06/28 14:52:26]
Downloading server file list... [2005/06/28 14:52:26]
Downloading server file list... Completed [2005/06/28 14:52:27]
Reading backup source from hard disk... ... [2005/06/28 14:52:28]
Getting all files which have been added... [2005/06/28 14:52:28]
Getting all files which have been added... ... [2005/06/28 14:52:28]
Getting all files which have been updated... [2005/06/28 14:52:28]
Getting all files which have been updated..... [2005/06/28 14:52:28]
Getting all files which have been deleted... [2005/06/28 14:52:29]
Getting all files which have been deleted... ... [2005/06/28 14:52:29]
Getting all files which have been moved... [2005/06/28 14:52:29]
Getting all files which have been moved... ... [2005/06/28 14:52:29]
Total New Files = 353 [2005/06/28 14:52:29]
Total Updated Files = 0 [2005/06/28 14:52:29]
Total Deleted Files = 0 [2005/06/28 14:52:29]
Total Moved Files = 0 [2005/06/28 14:52:29]
[New File] Uploading 100% of 'C:\Docume... [2005/06/28 14:52:31]
[New File] Uploading 100% of 'C:\Docume... [2005/06/28 14:52:31]
[New File] Uploading 100% of 'C:\Docume... [2005/06/28 14:52:31]
Backup Restore Log
Welcome to Online Backup Manager!
Quota (Remaining / Total): 500M / 500M
Last Backup: 2005-06-28 14:51

4 Setting up backup set

A backup set contains all backup settings of a backup operation. This section will describe all features available within a backup set and explain how you can use each of them to achieve various tasks.

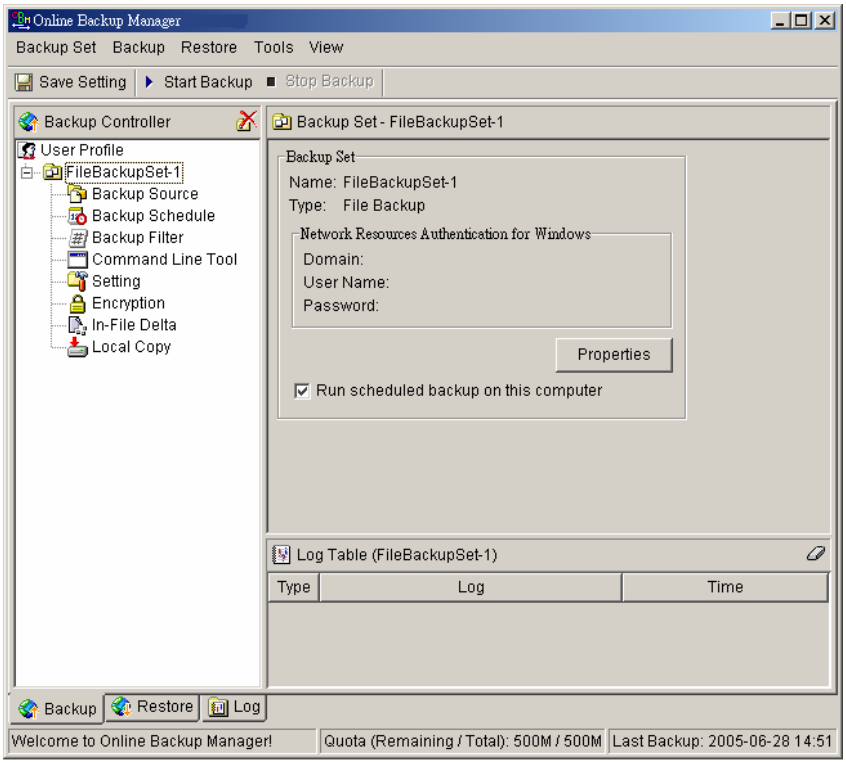
Each backup account can have multiple backup sets. Each backup set is an individual and independent entity. For example, if you want one directory to be backed up during the day and another directory to be backed up during the night, you can create two backup sets, each with a different backup schedule and backup source, to serve this need.

4.1 Backup Set Type

A backup set can be of one of the following types:

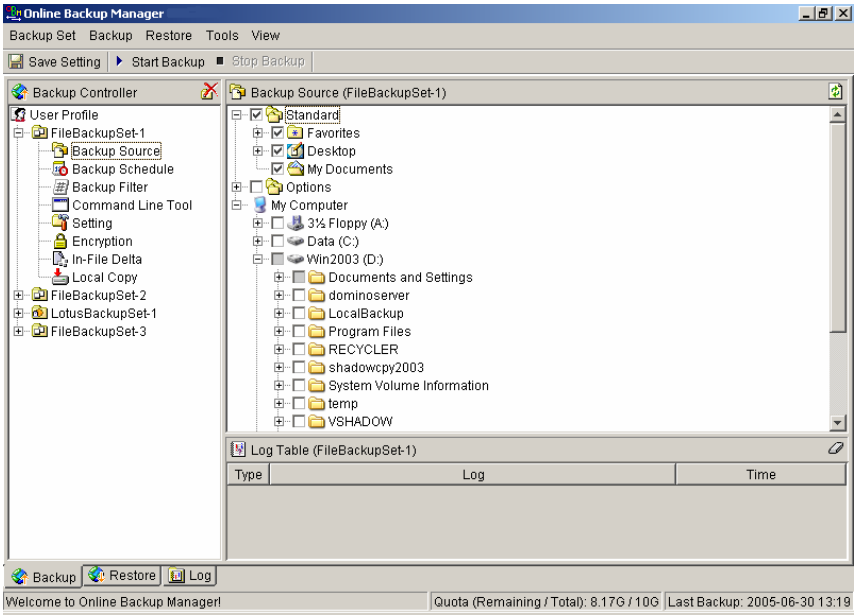
Backup Type	Description
File	Backup set type to backup common files/directories
Microsoft SQL Server	Backup set type to backup Microsoft SQL Server 7.0/2000
Oracle Database Server	Backup set type to backup Oracle 8i/9i database
Lotus Domino/Notes	Backup set type to backup Lotus Domino/Notes
Microsoft Exchange Server	Backup set type to backup Microsoft Exchange Server 2000 / 2003
MySQL	Backup set type to backup MySQL Server

Backup set type is defined at backup set creation and cannot be modified. If you want to change the backup set type, you have to create another backup set.



4.2 Backup Source

A backup source defines the files/directories that are to be included in a backup set. There are two types of backup source: Selected and Deselected. Selected backup source defines files/directories that are to be included in a backup set while deselected backup source defines files/directories that are to be excluded from a backup set. Online Backup Manager will generate appropriate backup source setting for you automatically when you make your backup source selection on DataboksOBM.

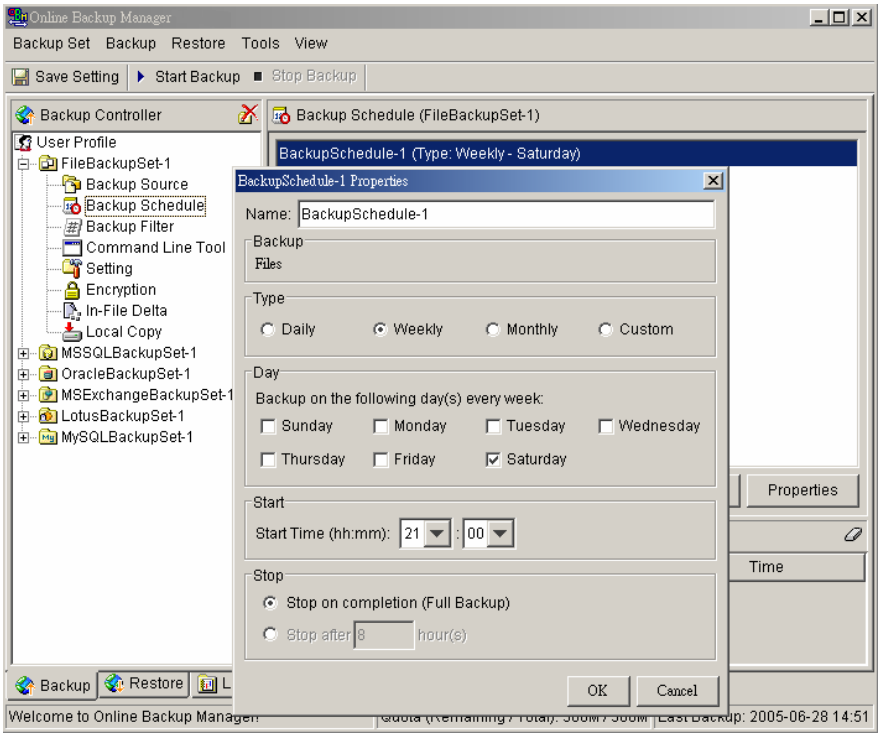


The checkbox next to the files/directories shown above can be in one of the following mode:

Mode	Description
☑	All files/directories (recursively) under this directory will be backed up
☑	All files/directories (recursively), except those explicitly excluded, under this directory will be backed up. If you add files/directories to this directory in the future, they will be backed up as well.
☐	Only the checked files/directories under this directory will be backed up. If you add files/directories to this directory in the future, they will NOT be backed up.
☐	Nothing under this directory will be backed up.

4.3 Backup Schedule

A backup schedule defines the frequency and the time backup will run automatically.



Backup schedule can be in one of the following types:

Type	Description
Daily	Backup jobs will run everyday
Weekly	Backup jobs will run on the specified day(s) of every week
Monthly	Backup jobs will run on the specified day or on a day with a given criteria (e.g. first weekend, last weekday) of every month
Custom	Backup job will run once on any particular date

For each type of schedule above, backup will run at scheduled time for a maximum of the duration specified (or until all data are backed up if [Stop on backup completion] option is chosen). If a backup job does not finish within the maximum duration specified, it will be interrupted.

Please note that you can have more than one schedule within a backup set. For example, you can have a daily backup schedule that runs at 13:00 at noon and another daily backup schedule that runs at 00:00 at midnight. The combination of both of these schedules effectively creates a backup schedule that runs daily at 00:00 and 13:00 everyday.

4.4 In-File Delta

Please refer to the in-file delta section for more information on this topic.

4.5 Backup Filter

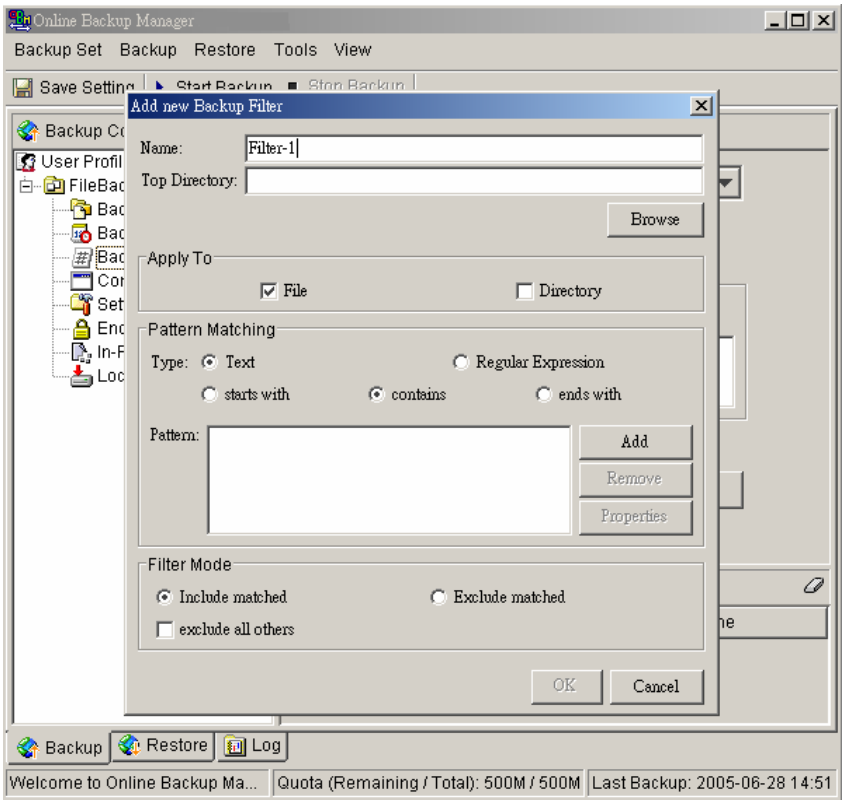
A backup filter defines the file selection rules that allow user to easily include/exclude files into/from the backup set by applying user defined criteria(s) to the file names or directory names.

There are some basic rule regarding backup filters:

i. Filters are checked in creation order. Once inclusion/exclusion has been identified, the remaining filters won't be checked.

ii. Inclusion/Exclusion made by filter always takes precedence over backup source selections

iii. If all filters do not apply to a particular file, this file is then checked for inclusion/exclusion backup source selections



Key	Description
Name	The name of a filter
Top Directory	The top directory to which this filter is applied. Filtering rules will be applied to all files and/or directories under this directory.

Apply To	Define whether to apply the filtering rule to files and/or directories
Pattern Matching	It defines the filtering rules of a filter. A filtering rule can be of one of the following types: [Start With] Include/Exclude all files/directories with name starting with a certain pattern. For example: You can use B* to match all files with name starting with a 'B' character [Contain] Include/Exclude all files/directories with name containing a certain pattern. For example: You can use *B* to match all files with name containing with a 'B' character [End With] Include/Exclude all files/directories with name ending with a certain pattern. For example: You can use *.doc to match all files with name ending with '.doc' (all Word documents) [Regular Expression] Include/Exclude all files/directories with name matching a regular expression.
Filter Mode	Defines whether you want to include or exclude matched files into/from the backup set. Also, for those unmatched files, you can choose to exclude (if include filter type) or include (if exclude filter type) them into/from the backup set.

Example 1:
If you want to backup only Word, Excel and PowerPoint documents in your document directory (e.g. C:\My Documents), you should setup your backup filter as follows.

Top Directory = C:\My Documents
Apply To = File (true)
Matching Type = End With
Matching Patterns = *.doc, *.xls, *.ppt
Filter Mode = Include
Exclude all others = True

Example 2:
If you want to backup all files, excluding all *.exe, *.dll and *.tmp, in C:\Applications, you should setup your backup filter as follows.

Top Directory = C:\Applications
Apply To = File (true)
Matching Type = End With
Matching Patterns = *.exe,*.dll, *.tmp
Filter Mode = Exclude
Include all others = True

Example 3:
If you have made your selection of files (all under C:\) from the backup source setting but you want exclude all images (e.g. *.jpg and *.gif) from your selection, you should setup your backup filter as follows.

Top Directory = C:\
Apply To = File (true)
Matching Type = End With
Matching Patterns = *.jpg, *.gif
Filter Mode = Exclude
Include all others = false

Please note that the [Include all others] setting is not enabled because you don't want to include all other files (NOT *.jpg, *.gif) under C:\ into the backup set.

Example 4: (advanced)

If you want to include everything, except the "log" directory, under C:\Applications into a backup set, you should setup your backup filter as follows.

Top Directory = C:\Applications
Apply To = Directory (true)
Matching Type = Regular Expression
Matching Patterns = ^log$
Filter Mode = Exclude
Include all others = True

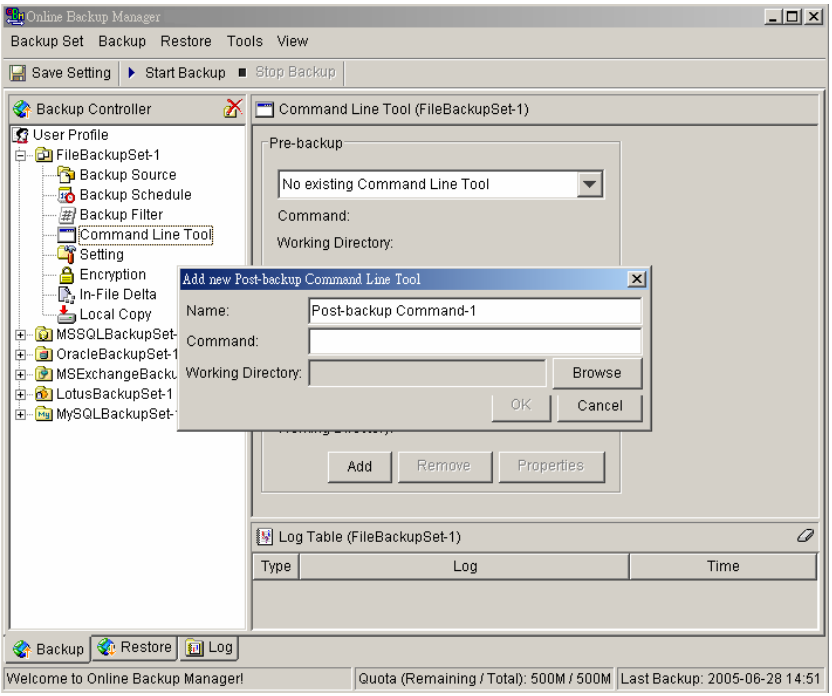
Example 5: (advanced)

If you want to include all directories named "log" from the backup set files with file name starting with "B" and ending with "*.doc" under C:\My Documents into the backup set, you can use a regular expression of "^B.*\.doc$" to do your selection. The filter backup can then be setup as follows.

Top Directory = C:\My Documents
Apply To = File (true)
Matching Type = Regular Expression
Matching Patterns = ^B.*\.doc$
Filter Mode = Include
Exclude all others = True

4.6 Pre/Post-Backup Command

The command line tool feature has two major components, the [Pre-Backup] command and the [Post-Backup] command. You can use the [Pre-Backup] or [Post-Backup] commands to run any native OS (operating system) commands before or after running a backup job.



Both [Pre-Backup] and [Post-Backup] commands comprise of the following parameters:

Key	Description
Name	Name of this Command
Command	The command to be run (e.g. C:\My Documents\Application.exe or C:\My Documents\BatchJob.bat)
Working Directory	The directory at which this command will run

The backup set type affects the time at which [Pre-Backup] and [Post-Backup] commands run. The following table outlines when [Pre-Backup] and [Post-Backup] commands will run in different types of backup set.

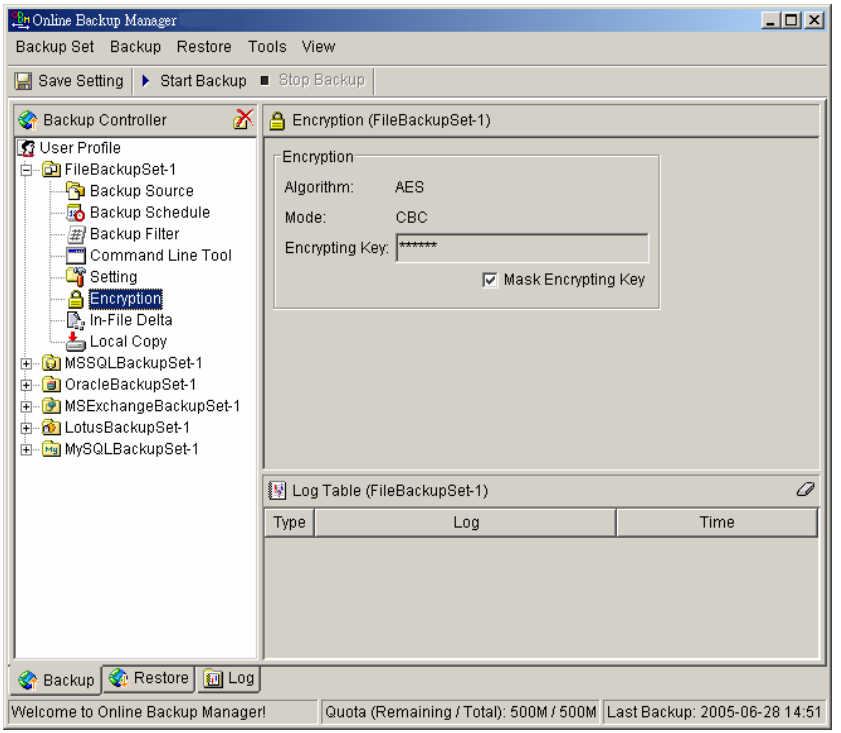
Backup Set Type	When Pre-Backup Commands run?	When Post-Commands run?
File	Before uploading backup files	After uploading all backup files
Non-File Backup Sets (e.g. Microsoft SQL Server)	Before spooling backup files to temporary directory	After spooling backup files to temporary directory (i.e. before the first backup file is uploaded)

Note: You should never backup an application while it is running as this can result in inconsistent and unusable files getting backed up. Please use the Pre-Backup Command feature to shutdown your application before running a backup job and use the Post-Backup Command feature to restart your application after the backup job has completed.

4.7 Encryption

Before your files are sent to Databoks Offsite Backup Server, all your files are to be compressed and encrypted by your choice of encrypting algorithm, mode and key. The following table explains all encryption parameters available within a backup set.

Note:
Encryption settings are set at backup set creation time and cannot be modified. You need to create a new backup set if you want to change your encryption settings for a backup set.



Parameter	Description
Encryption Algorithm	It defines the encrypting algorithm used to encrypt your backup files. There are three encryption algorithms available: [AES] Advanced Encryption Standard algorithm [DESede] Triple DES algorithm [Twofish] Twofish algorithm We recommend the use of AES as it has been chosen as the encryption standard for commercial use. Please refer to references on Cryptography for more information on this area.
Encryption Mode	It defines the encrypting mode used to encrypt your backup files. There are two encryption modes available:

	[ECB] Electronic Cook Book Mode [CBC] Cipher Block Chaining Mode We recommend the use of CBC mode as it offers better security. Please refer to references on Cryptography for more information on this area.
Encrypting Key	The key used to encrypt all files within a backup set. **Please write it down on paper and keep it in a safe place. If the key is lost, you will not be able to recover your files from the encrypted backup files.**

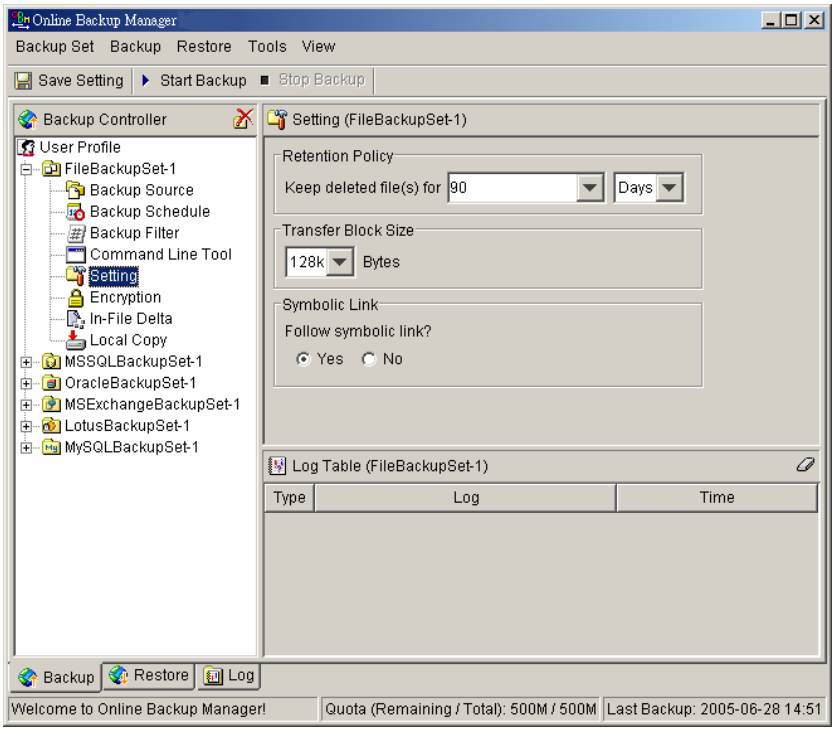
4.8 Retention Policy

During backup, if DataboksOBM finds out that you have deleted a file (or updated a file) on your computer, it will put the corresponding deleted (or updated) file already backed up on the backup server into a retention area. The retention policy setting defines how long files inside the retention area will be kept on the backup server before they are deleted automatically from the server.

Retention policy will only affect "retained" file (i.e. files that have already been deleted or updated on your computer). For those files that have not been updated on your computer, the backup of these files are kept in the data area on the backup server and won't be affected by the setting of retention policy. These backup files of unchanged files will stay on the backup server forever until the original files are removed (or updated) from your computer.

You can choose to have retained files deleted automatically after a number of days or after a certain number of backup jobs.

To change the retention policy setting of any backup set, please select the [Setting] node on the left panel to invoke the [Setting] panel on the right. You can then make changes to your retention policy under the [Retention Policy] section. After you have made your changes, just press the [Save Setting] button on the toolbar.

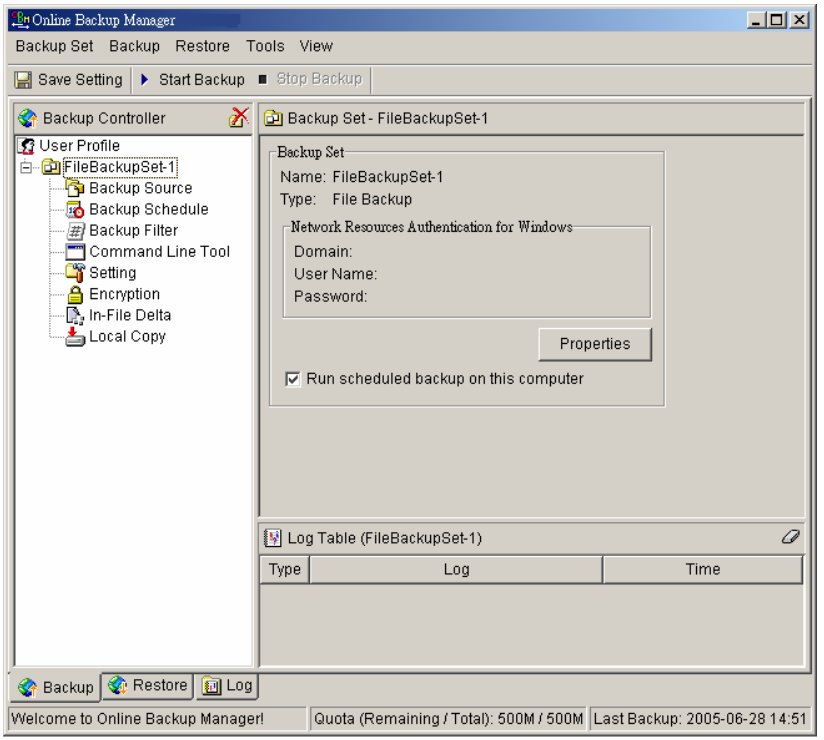


4.9 Network Mapped Drive

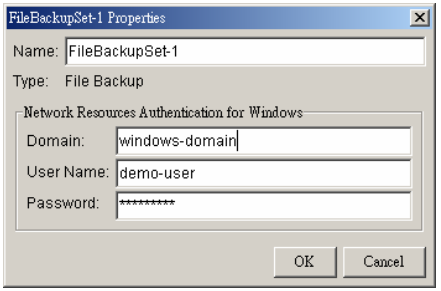
If you need to backup a network-mapped drive on Windows (it will only work in Windows NT/2000/XP/2003), you must enter your Windows domain, username and password into the [Network Resources Authentication for Windows] section as shown below. It is required because scheduled backups will always run under the context of windows LocalSystem account (which does not have the privilege required to access network resources) by default. DataboksOBM need to collect your Windows username, password and domain name to authenticate itself to the windows domain controller to acquire the required access privileges to the network files which are to be backed up. If you don't supply a username and password, DataboksOBM will have problem accessing network resources in its scheduled backup jobs.

If you need to backup network mapped drive in scheduled backup, please do this:

i. Select the backup set from the left panel and press the [Properties] button



ii. Enter your Windows domain, username and password into the dialog shown below



iii. Press the [Save Setting] button on the toolbar

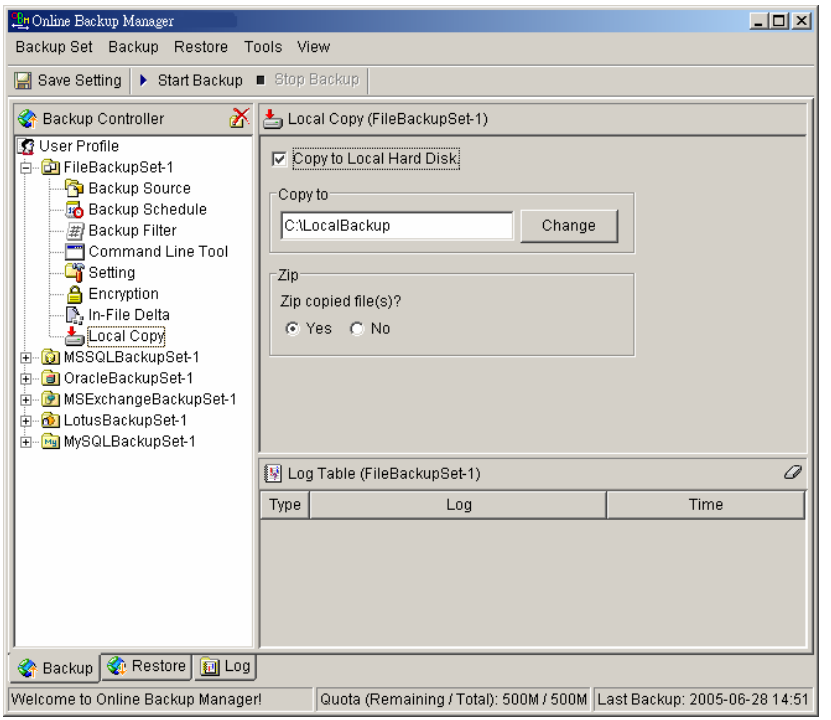
4.10 Local Copy

If you want to save an extra copy of backup data on your local disk (in addition to a copy of backup data stored on the backup server) to minimize file-restoring time and/or to provide an extra safety precaution, you can do the following:

i. Open DataboksOBM from the System Tray (see previous sections for details)

ii. Setup your backup set (see previous sections for details)

iii. Select [Local Copy] under your backup set from the left panel

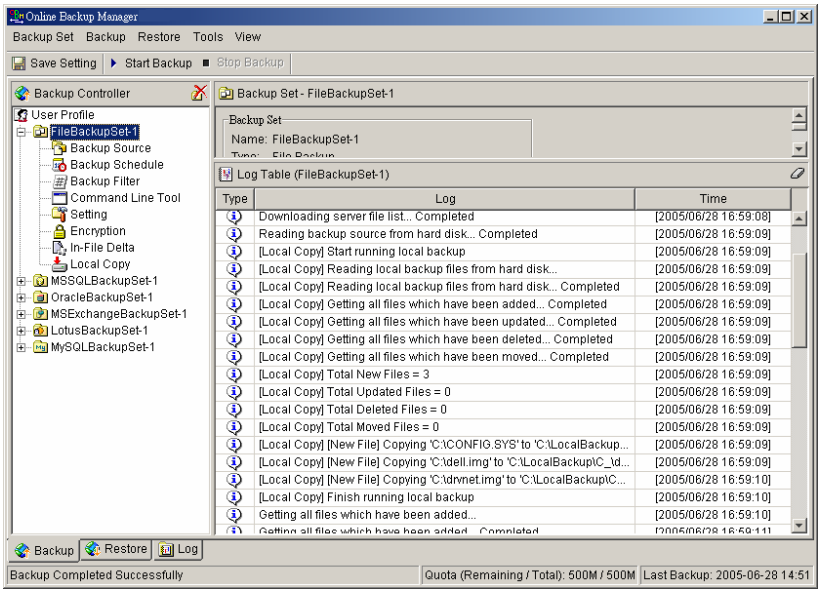


iv. Check the [Copy to Local Hard Disk] checkbox

v. Enter a directory to where you want an extra copy of your backup files to be stored in the [Copy to] field provided (preferably a directory under another hard disk)

vi. (Optional) Select the [Yes] radio button if you want to store your backup files in compressed form to conserve free space usage

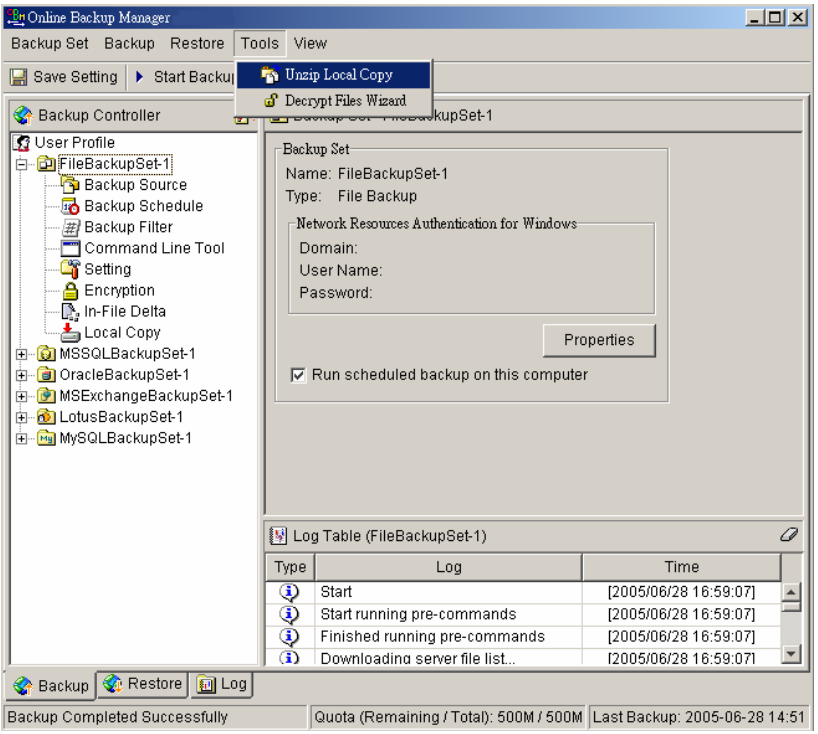
vii. An extra copy of backup will be saved in the [Copy to] directory when you run your backup job


Online Backup Manager
Backup Set Backup Restore Tools View
Save Setting Start Backup Stop Backup
Backup Controller
User Profile
FileBackupSet-1
Backup Source
Backup Schedule
Backup Filter
Command Line Tool
Setting
Encryption
In-File Delta
Local Copy
MSSQLBackupSet-1
OracleBackupSet-1
MSExchangeBackupSet-1
LotusBackupSet-1
MySQLBackupSet-1
Backup Set - FileBackupSet-1
Backup Set
Name: FileBackupSet-1
Log Table (FileBackupSet-1)
Type
Log
Time
Downloading server file list... Completed [2005/06/28 16:59:08]
Reading backup source from hard disk... Completed [2005/06/28 16:59:09]
[Local Copy] Start running local backup [2005/06/28 16:59:09]
[Local Copy] Reading local backup files from hard disk... [2005/06/28 16:59:09]
[Local Copy] Reading local backup files from hard disk... Completed [2005/06/28 16:59:09]
[Local Copy] Getting all files which have been added... Completed [2005/06/28 16:59:09]
[Local Copy] Getting all files which have been updated... Completed [2005/06/28 16:59:09]
[Local Copy] Getting all files which have been deleted... Completed [2005/06/28 16:59:09]
[Local Copy] Getting all files which have been moved... Completed [2005/06/28 16:59:09]
[Local Copy] Total New Files = 3 [2005/06/28 16:59:09]
[Local Copy] Total Updated Files = 0 [2005/06/28 16:59:09]
[Local Copy] Total Deleted Files = 0 [2005/06/28 16:59:09]
[Local Copy] Total Moved Files = 0 [2005/06/28 16:59:09]
[Local Copy] [New File] Copying 'C:\CONFIG.SYS' to 'C:\LocalBackup... [2005/06/28 16:59:09]
[Local Copy] [New File] Copying 'C:\dell.img' to 'C:\LocalBackup\C_\d... [2005/06/28 16:59:09]
[Local Copy] [New File] Copying 'C:\drvnet.img' to 'C:\LocalBackup\C... [2005/06/28 16:59:10]
[Local Copy] Finish running local backup [2005/06/28 16:59:10]
Getting all files which have been added... [2005/06/28 16:59:10]
Backup Restore Log
Backup Completed Successfully
Quota (Remaining / Total): 500M / 500M
Last Backup: 2005-06-28 14:51

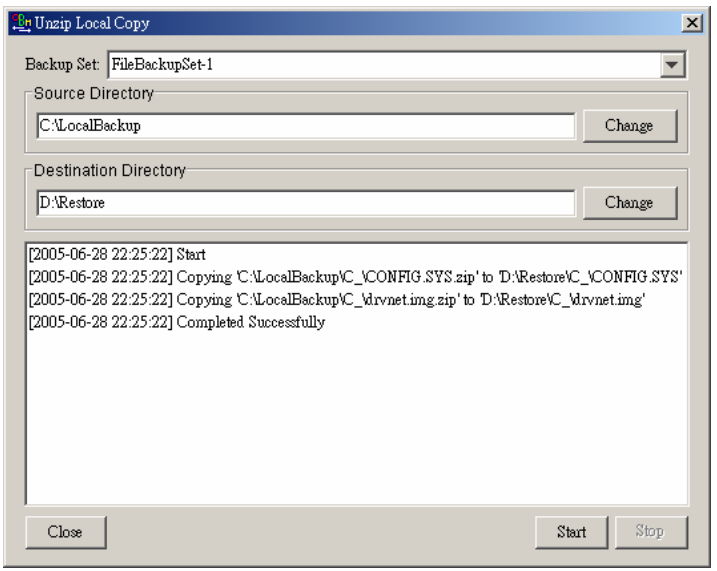
How to restore "Local Copy" files

"Local copy" files are stored in the [Copy to] directory (under [Local Copy] setting) in encoded filenames (A ".nozip" extension is appended to all filenames if [Zip] setting is not enabled. A ".zip" extension is appended to all filenames if [Zip] is enabled). To restore backup files back to their original filenames (and to their original contents if [Zip] is enabled), please do the followings:

i. Choose [Tools] -> [Unzip Local Copy]



ii. Select the required [Backup Set] from the drop down list



iii. Fill in the [Source Directory] (directory where "Local Copy" files are stored) and [Destination Directory] (directory to where you want "Local Copy" files to be

restored)

iv. Completed

4.11 Multiple Computers using one backup account

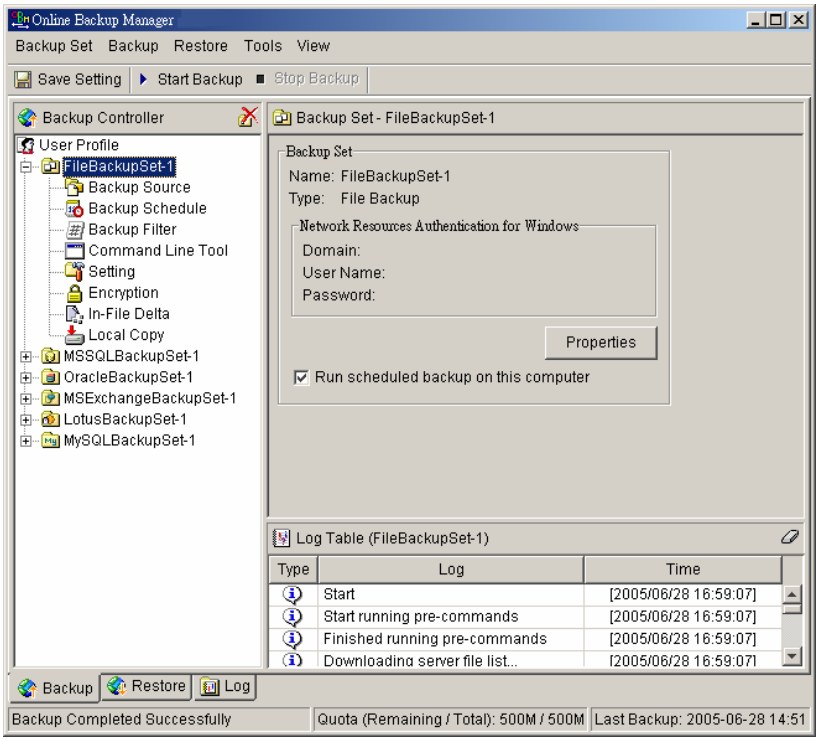
If you want to backup multiple computers using a single backup account, you need to create different backup sets to backup each individual computer. Also, for each installed copy of DataboksOBM, you must configure DataboksOBM so that it only runs scheduled backup for its intended backup sets on its computer. If this is not being setup properly, scheduled backup job of the same backup set from different computers will both be started. This will result in lots of checksum errors and files being deleted on the backup server.

To allow multiple computers to be backed up under a single backup account, you are required to do the following **for each computer** that has been installed with DataboksOBM under the same backup account:

i. Logon to one of the computers that has been installed with DataboksOBM under the same backup account

ii. Open DataboksOBM and select a backup set that is not intended to run on this computer from the left panel

iii. Uncheck the [Run scheduled backup on this computer] checkbox on the right panel



iv. Repeat the previous step for the rest of all backup sets that are not intended to run on this computer

v. Repeat step ii to step iv for each computer that has been installed with DataboksOBM under the same backup account

IMPORTANT If you want to backup an extra computer using the same backup account some time later (this implies that you need to create an additional backup set under this backup account for the new computer), please make sure to repeat the procedure above (unchecking the [Run scheduled backup on this computer] checkbox for the added backup set) for each computer

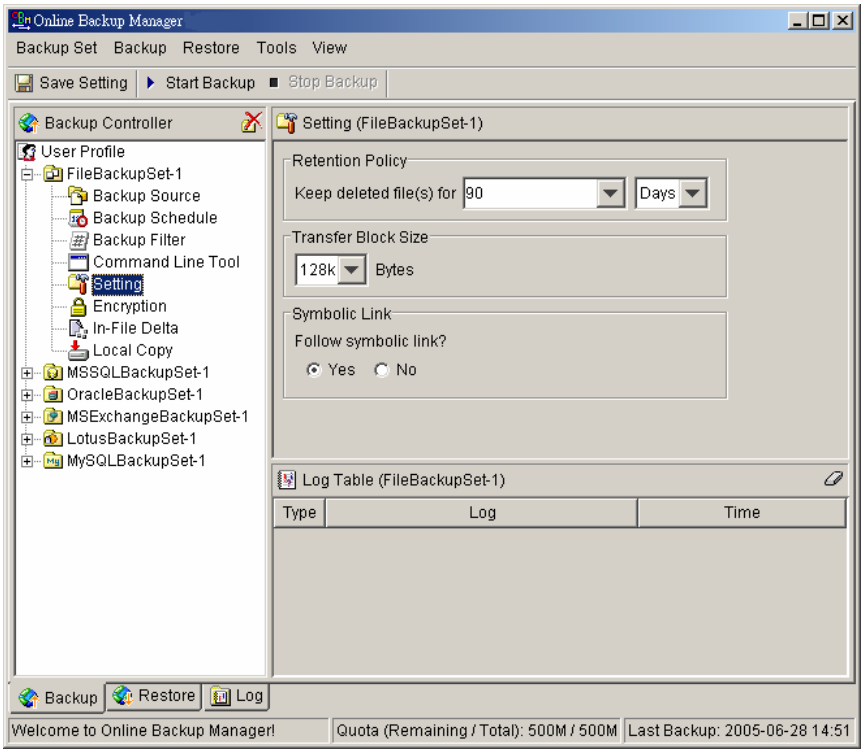
4.12 Transfer Block Size

Transfer block size defines the block size DataboksOBM will use to transfer your backup blocks. Generally, backup job using a larger block size would have a better performance, as there will be less roundtrip involved in connection initialization.

However, some firewalls or proxy servers may block out-going network traffic (HTTP/HTTPS POST method) with large block size for security reasons. If you are in a network with this type of restriction, please lower the transfer size value and try again.

To change the transfer block size of any backup set, please select the [Setting] node on the left panel to invoke the [Setting] panel on the right. You can then make changes to the [Transfer Block Size]. After you have made your changes, just press the [Save Setting] button on the

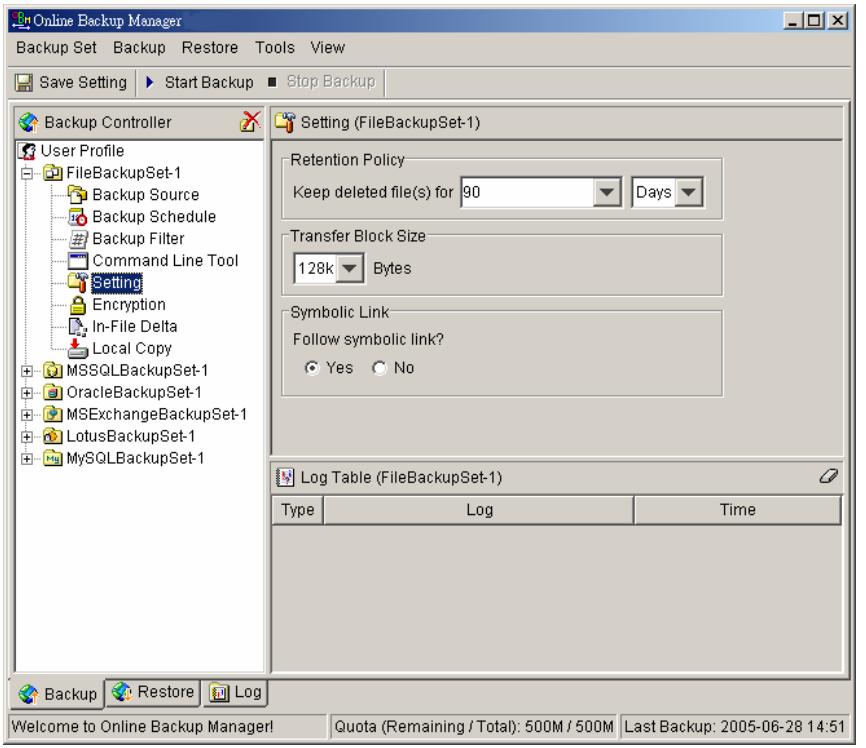
toolbar.



4.13 Follow Symbolic Link (Linux/Unix/Mac only)

Under Unix/Linux, users can use symbolic link to create a simple link to a directory from another directory. This setting defines whether you want DataboksOBM to traverse any symbolic links encountered on your backup path.

To change the transfer block size of any backup set, please select the [Setting] node on the left panel to invoke the [Setting] panel on the right. You can then make changes to the [Follow Symbolic Link]. After you have made your changes, just press the [Save Setting] button on the toolbar.

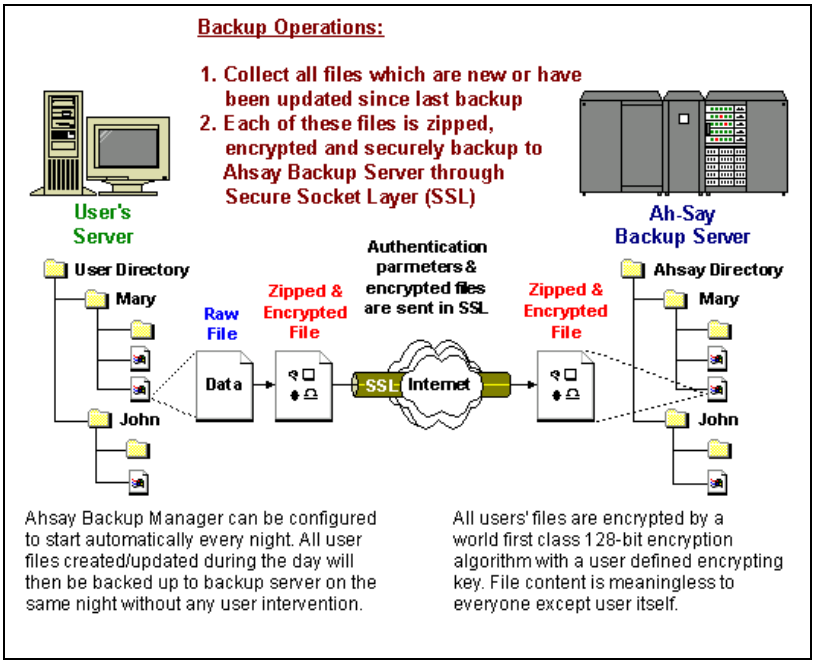

Online Backup Manager
Backup Set Backup Restore Tools View
Save Setting Start Backup Stop Backup
Backup Controller
User Profile
FileBackupSet-1
Backup Source
Backup Schedule
Backup Filter
Command Line Tool
Setting
Encryption
In-File Delta
Local Copy
MSSQLBackupSet-1
OracleBackupSet-1
MSExchangeBackupSet-1
LotusBackupSet-1
MySQLBackupSet-1
Setting (FileBackupSet-1)
Retention Policy
Keep deleted file(s) for 90 Days
Transfer Block Size
128k Bytes
Symbolic Link
Follow symbolic link?
Yes No
Log Table (FileBackupSet-1)
Type Log Time
Backup Restore Log
Welcome to Online Backup Manager!
Quota (Remaining / Total): 500M / 500M
Last Backup: 2005-06-28 14:51

5 Backing up files

This chapter describes how files are backed up by DataboksOBM to the backup server

5.1 How files are backed up

The diagram below describes how DataboksOBM backup your files.


Backup Operations:
1. Collect all files which are new or have been updated since last backup
2. Each of these files is zipped, encrypted and securely backup to Ahsay Backup Server through Secure Socket Layer (SSL)
User's Server
Ah-Say Backup Server
User Directory
Mary
John
Raw File
Data
Zipped & Encrypted File
Authentication parmeters & encrypted files are sent in SSL
SSL
Internet
Zipped & Encrypted File
Ahsay Directory
Mary
John
Ahsay Backup Manager can be configured to start automatically every night. All user files created/updated during the day will then be backed up to backup server on the same night without any user intervention.
All users' files are encrypted by a world first class 128-bit encryption algorithm with a user defined encrypting key. File content is meaningless to everyone except user itself.

Run backup at scheduled time automatically

Once you set your backup scheduled, a backup job will be started automatically to perform backup operation for you at your absence. You can have backup running at your scheduled time as often as you want (e.g. twice a day or hourly during office hour) without requiring doing any extra work.

Incremental Backup

Unchanged files are already backed up to server and need not to be backed up again. DataboksOBM will pick the new or updated files from your backup set files and upload only these files to the server. It significantly reduces the time required to perform the backup operation since most users update less than 5% of their total data each day.

Compress and encrypt data automatically

Data are compressed and encrypted before they are uploaded to the server. Not only does it

reduce the storage space to keep you backup files, it also ensures the privacy of your data.

File Retention Policy

The built-in file retention policy allows you to access multiple versions of the same file or even deleted files from your backup set. Backup files are put into a retention area before they are removed from the server. If you want to get back a deleted file (or you want to get back the previous versions of an updated files) within the retention period, these files will always be available in the retention area. This feature is particularly useful when you have accidentally deleted a file or incorrectly updated a file within the file retention period (file retention period is user customizable).

5.2 Backup files directly to the backup server

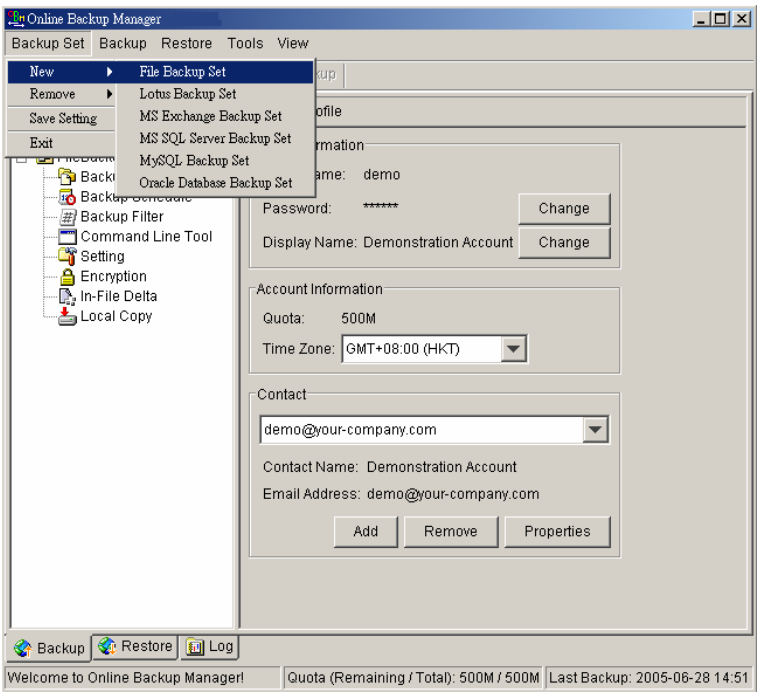
You can backup your data to an Databoks Offsite Backup Server by following instructions below.

i. Open DataboksOBM

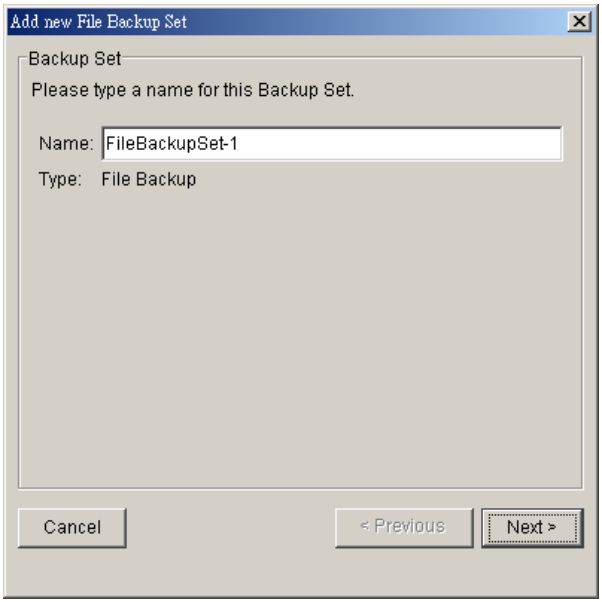
ii. Right click DataboksOBM icon available in the system tray and choose [Open]

a. Create a backup set

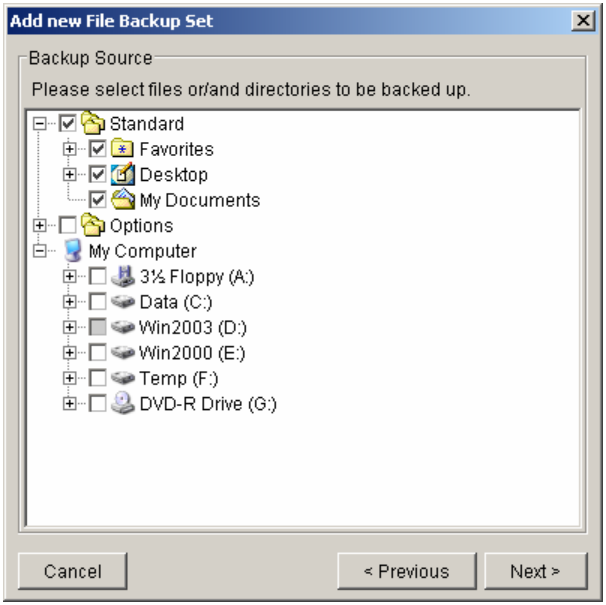
b. From the Menu, Choose [Backup Set] -> [New] -> [File Backup Set]



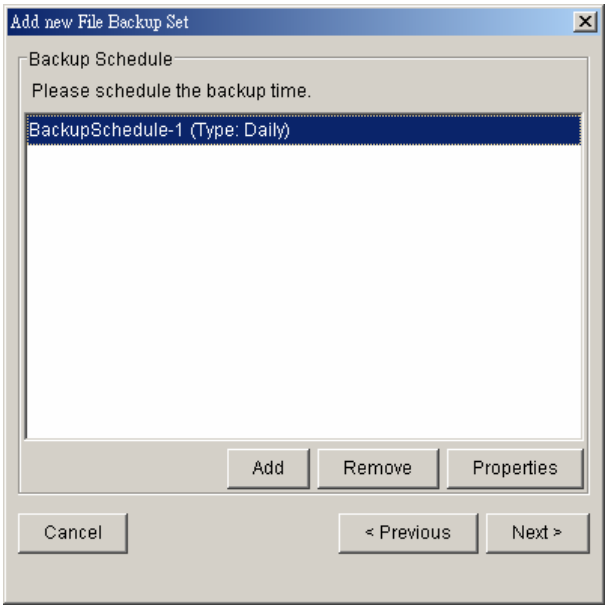
c. Enter a name for your backup set



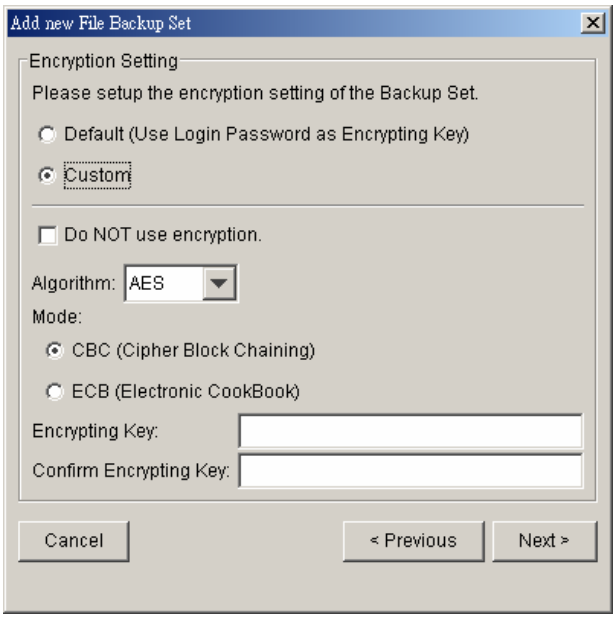
d. Select the files/directories you want to backup



e. Set the backup schedule (Note: You can have more than one schedule in a backup set)



f. Set the encryption algorithm, encryption mode and encrypting key for this backup set
(Hint: For the sake of simplicity, just select the [Default] radio button (your encrypting key is set to be the same as your backup account password)



iii. Run Backup

a. Select the backup set you want to run on the left panel and press the [Start Backup] button (►) on the toolbar

b. Select [Off-site Backup Server] to start backing up your files to an Databoks Offsite Backup Server.

Note:
1. You can have more than one backup set in backup account.
2. Please write the encrypting key down on paper and keep it in a safe place. If you lost your encrypting key is lost, you will not be able to restore your backup files.

5.3 Backup files to removable hard disk (seed loading)

If you have a lot of data (e.g. 300GB) to backup to the backup server, it would take a considerable amount of time to perform the first full backup through the Internet. If you run into this problem, you can use the Seed Loading Utility to backup your backup set to local hard disk (instead of directly to the backup server) and then transport the backup data, using removable hard disk, to the offsite backup server. The administrator can then load all your backup files from your removable hard disk into your backup account. This could then save you days (even weeks) of performing your first full backup. Since subsequent backup will be incremental backup (only new or updated files will be uploaded to the server), you should have no problems finishing backing up all files afterwards.

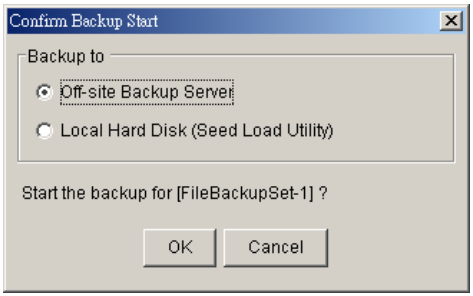
To perform seeding loading, please do the following:

i. Open DataboksOBM from the System Tray (see previous sections for details)

ii. Setup your backup set (see previous sections for details)

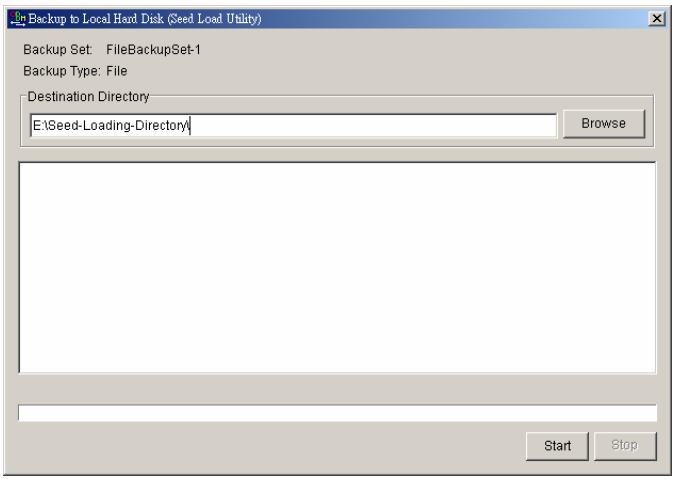
iii. Select the backup set you want to run on the left panel and press the [Start Backup] button (►) on the toolbar

iv. Select [Local Hard Disk (Seed Load Utility)] to start backing up your files to local hard disk and press the [OK] button

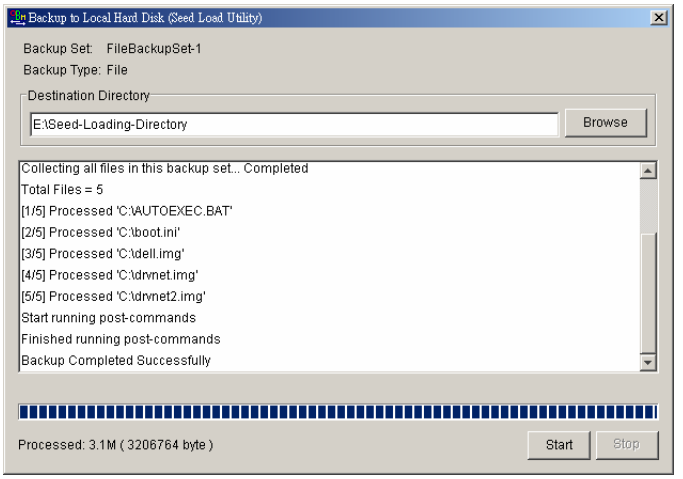


v. Enter a directory where you want all backup files to be stored in the [Destination Directory] field and press the [Start] button.

Please make sure you have enough free space in the directory specified. If you are going to transport a removable hard disk to the offsite backup server, please enter a directory under your removable hard disk here.



vi. You should get the message "Backup Completed Successfully" as shown below after all backup files are spooled to the directory you specified.



vii. Transport the data specified in the [Destination Directory] field to the offsite backup server

6 Restoring files

This chapter describes different ways files can be restored from to the backup server

It is important to write down your encrypting key on paper and keep it in a safe place because there will be no ways to restore your backup files if you lose your encrypting key.

6.1 Restore backup files directly from backup server

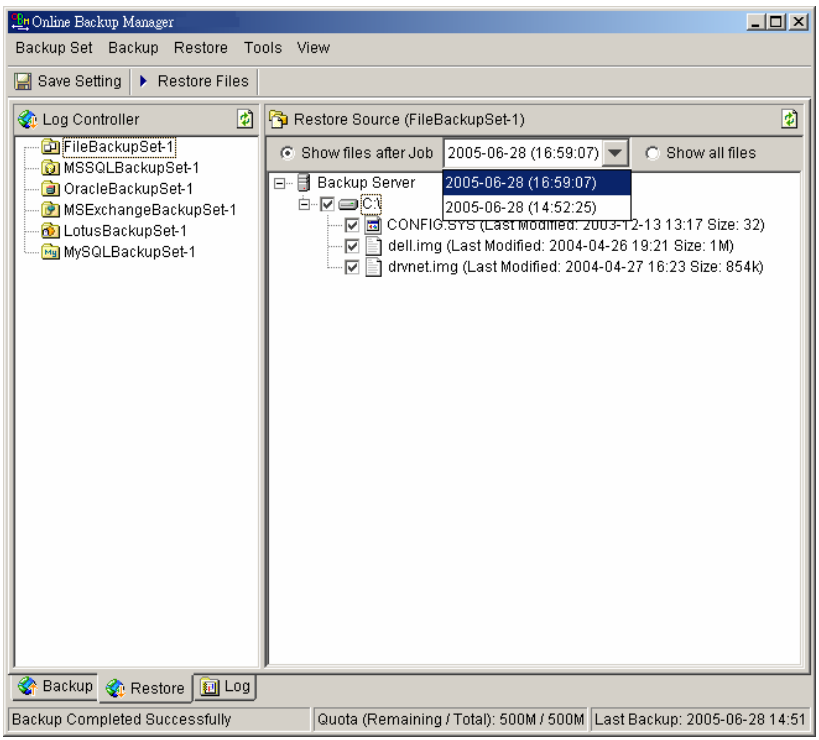
You can use either DataboksOBM or the web restorer to restore backup files from the backup server.

Using DataboksOBM

You can restore your data from the backup server Databoks by following instructions below.

i. Open DataboksOBM from the System Tray (see previous sections for details)

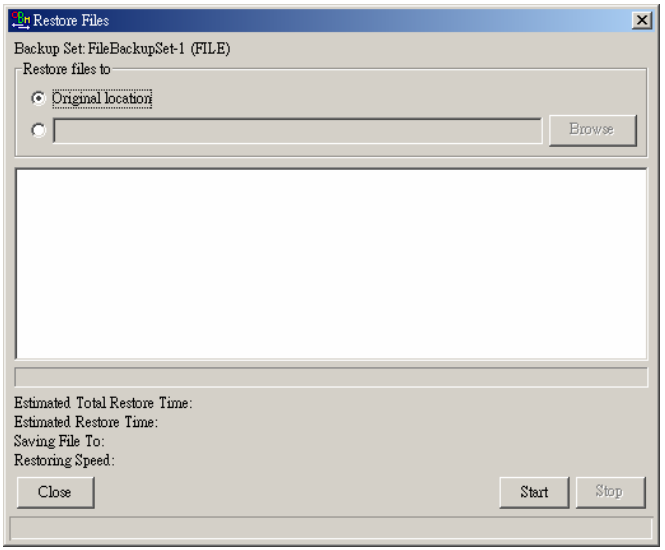
ii. Select the [Restore] tab at the bottom part of DataboksOBM



iii. Select the backup set from which you would like files to be restored from the left panel

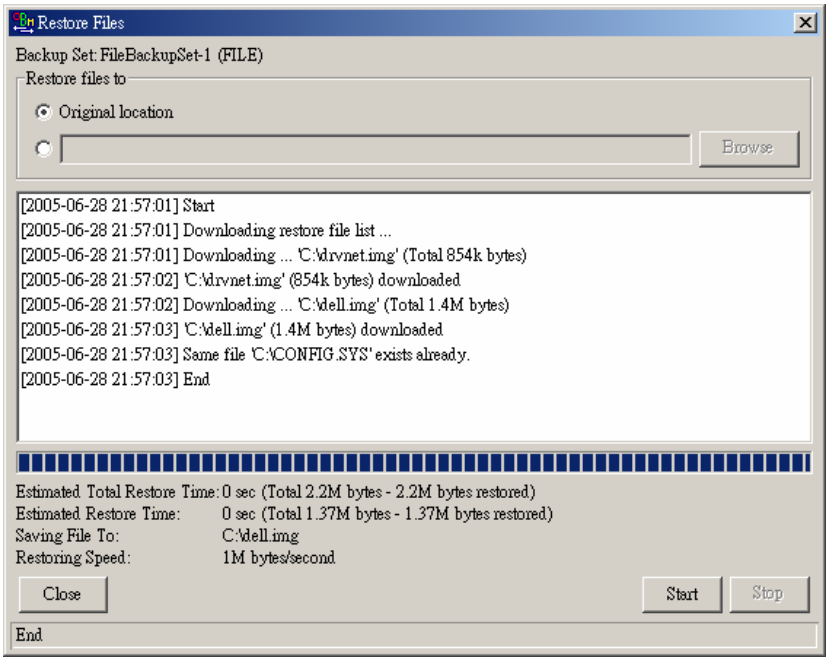
iv. Select the snapshot of your backup files that you would like to restore from the backup server by using [Show files after Job] drop down list

v. Select the files that you would like to restore and press the [Restore Files] button on the toolbar



vi. Use the [Browse] button to select the directory to where you want files to be restored (or simply select [Original location] to restore files to their original path)

vii. Files will be restored automatically as shown below (a file won't be downloaded from the backup server again if an identical file exists on local path already)

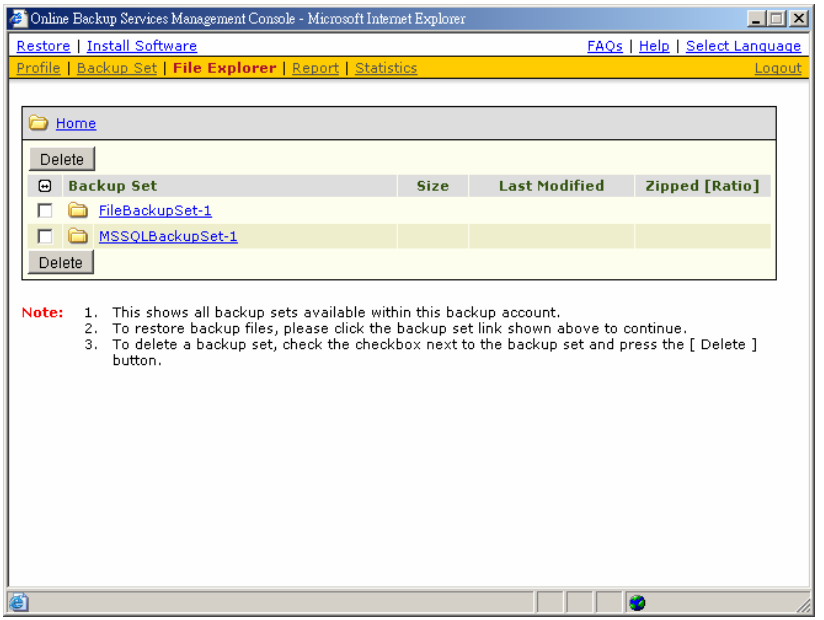

Restore Files
Backup Set: FileBackupSet-1 (FILE)
Restore files to
Original location
Browse
[2005-06-28 21:57:01] Start
[2005-06-28 21:57:01] Downloading restore file list ...
[2005-06-28 21:57:01] Downloading ... 'C:\drvnet.img' (Total 854k bytes)
[2005-06-28 21:57:02] 'C:\drvnet.img' (854k bytes) downloaded
[2005-06-28 21:57:02] Downloading ... 'C:\dell.img' (Total 1.4M bytes)
[2005-06-28 21:57:03] 'C:\dell.img' (1.4M bytes) downloaded
[2005-06-28 21:57:03] Same file 'C:\CONFIG.SYS' exists already.
[2005-06-28 21:57:03] End
Estimated Total Restore Time: 0 sec (Total 2.2M bytes - 2.2M bytes restored)
Estimated Restore Time: 0 sec (Total 1.37M bytes - 1.37M bytes restored)
Saving File To: C:\dell.img
Restoring Speed: 1M bytes/second
Close
Start
Stop
End

Using the web interface

You can backup your data to an Databoks Offsite Backup Server by following instructions below.

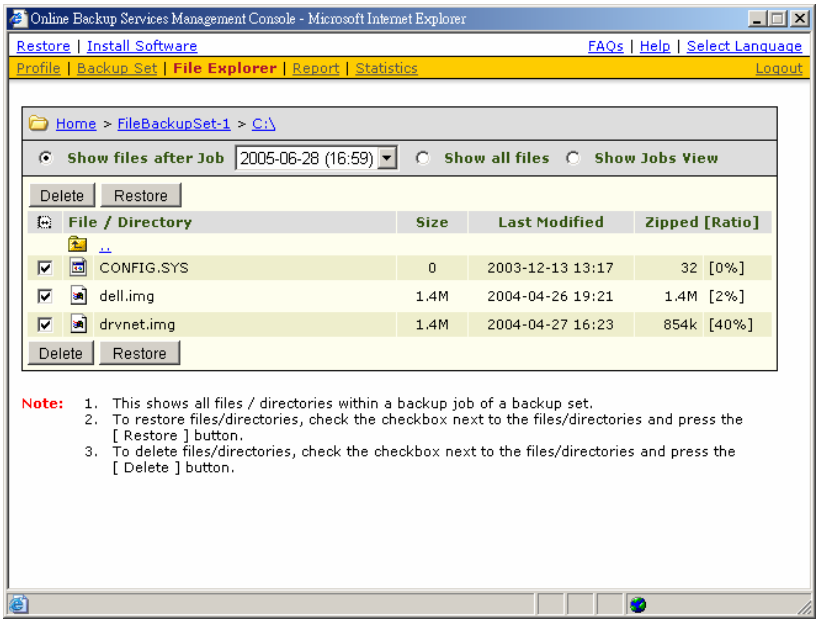
i. Logon to the Databoks Offsite Backup Server web interface

ii. From the top menu, click [File Explorer]


Online Backup Services Management Console - Microsoft Internet Explorer
Restore | Install Software
FAQs | Help | Select Language
Profile | Backup Set | File Explorer | Report | Statistics
Logout
Home
Delete
Backup Set
Size
Last Modified
Zipped [Ratio]
FileBackupSet-1
MSSQLBackupSet-1
Delete
Note:
1. This shows all backup sets available within this backup account.
2. To restore backup files, please click the backup set link shown above to continue.
3. To delete a backup set, check the checkbox next to the backup set and press the [Delete] button.

iii. Click the [Backup Set] link that contains the files that you want to restore

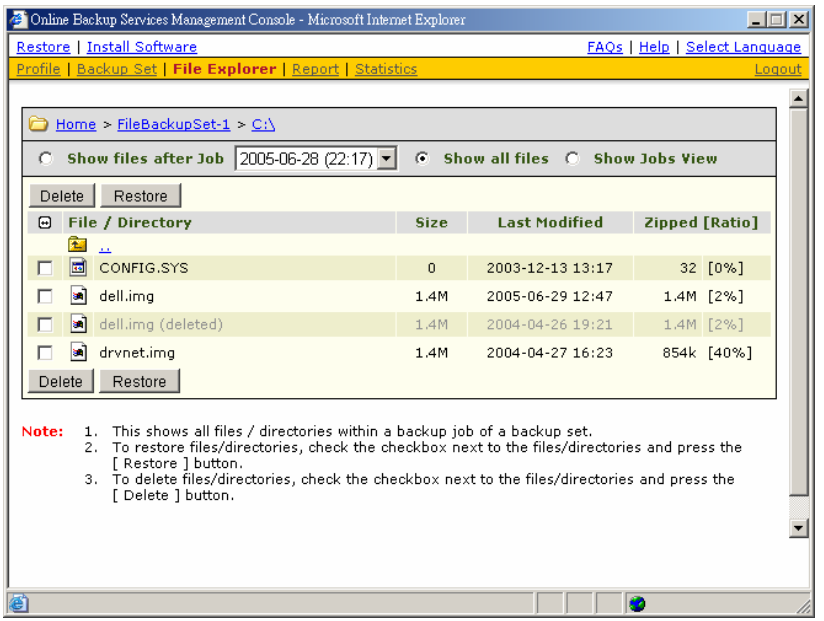
iv. Select the snapshot of your backup files that you would like to restore from the backup server by using [Show files after Job] drop down list



v. If you want to see all different versions all files (shown as gray below), just choose

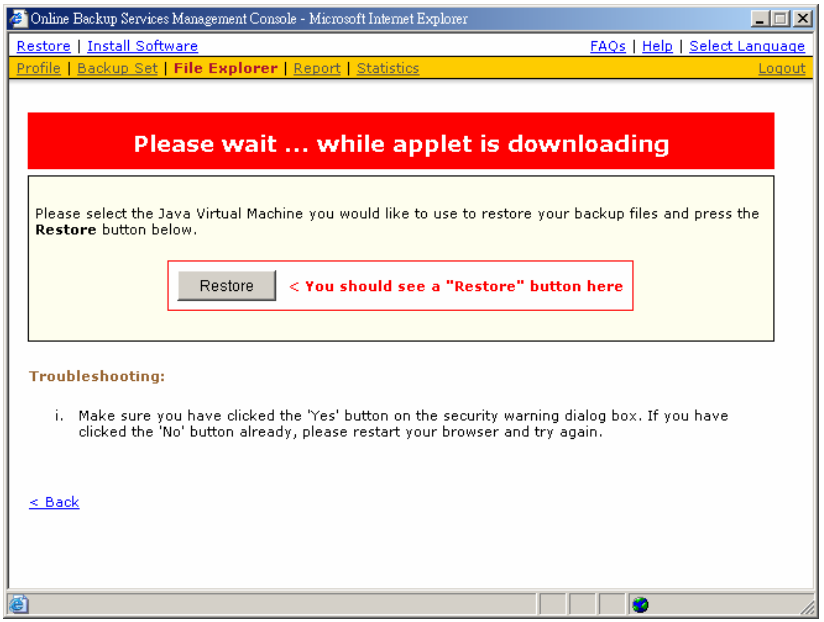
the [Show all files] radio button on the [File Explorer] page.

Files, which are shown in gray and marked as deleted below, e.g. dell.img (delete), are being stored in the retention area on the backup server but you can still restore these files from the backup server.


Online Backup Services Management Console - Microsoft Internet Explorer
Restore | Install Software
FAQs | Help | Select Language
Profile | Backup Set | File Explorer | Report | Statistics
Logout
Home > FileBackupSet-1 > C:\
Show files after Job 2005-06-28 (22:17)
Show all files
Show Jobs View
Delete
Restore
File / Directory
Size
Last Modified
Zipped [Ratio]
..
CONFIG.SYS 0 2003-12-13 13:17 32 [0%]
dell.img 1.4M 2005-06-29 12:47 1.4M [2%]
dell.img (deleted) 1.4M 2004-04-26 19:21 1.4M [2%]
drvnet.img 1.4M 2004-04-27 16:23 854k [40%]
Delete
Restore
Note: 1. This shows all files / directories within a backup job of a backup set.
2. To restore files/directories, check the checkbox next to the files/directories and press the [Restore] button.
3. To delete files/directories, check the checkbox next to the files/directories and press the [Delete] button.

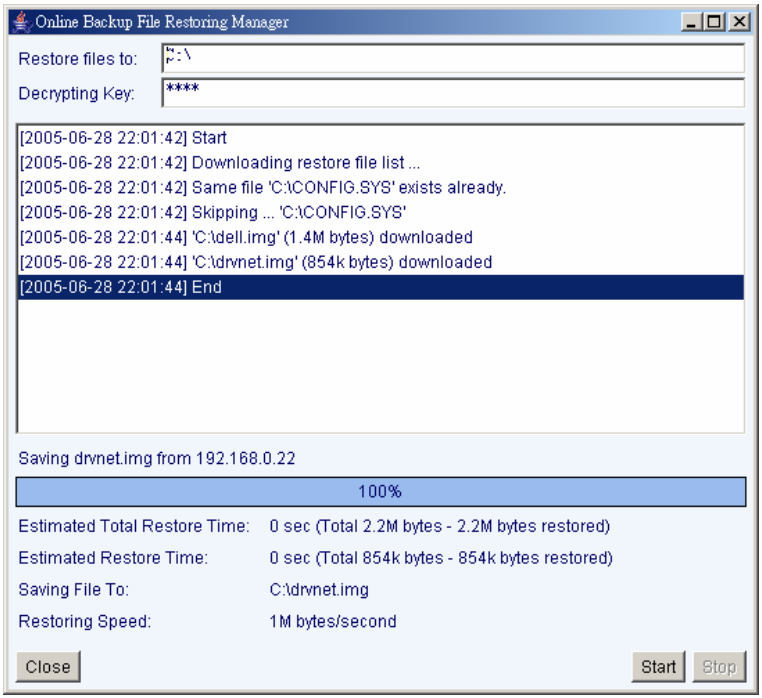
vi. Select the files that you would like to restore and press the [Restore] button on the toolbar

vii. A dialog shown below would appear


Online Backup Services Management Console - Microsoft Internet Explorer
Restore | Install Software
FAQs | Help | Select Language
Profile | Backup Set | File Explorer | Report | Statistics
Logout
Please wait ... while applet is downloading
Please select the Java Virtual Machine you would like to use to restore your backup files and press the Restore button below.
Restore
< You should see a "Restore" button here
Troubleshooting:
i. Make sure you have clicked the 'Yes' button on the security warning dialog box. If you have clicked the 'No' button already, please restart your browser and try again.
< Back

a. Press the [Restore] button

b. Enter the directories to which backup files should be restored in the [Restore File to] textbox



c. Enter the encrypting key which will be used to decrypt your backup files upon restoring your backup files

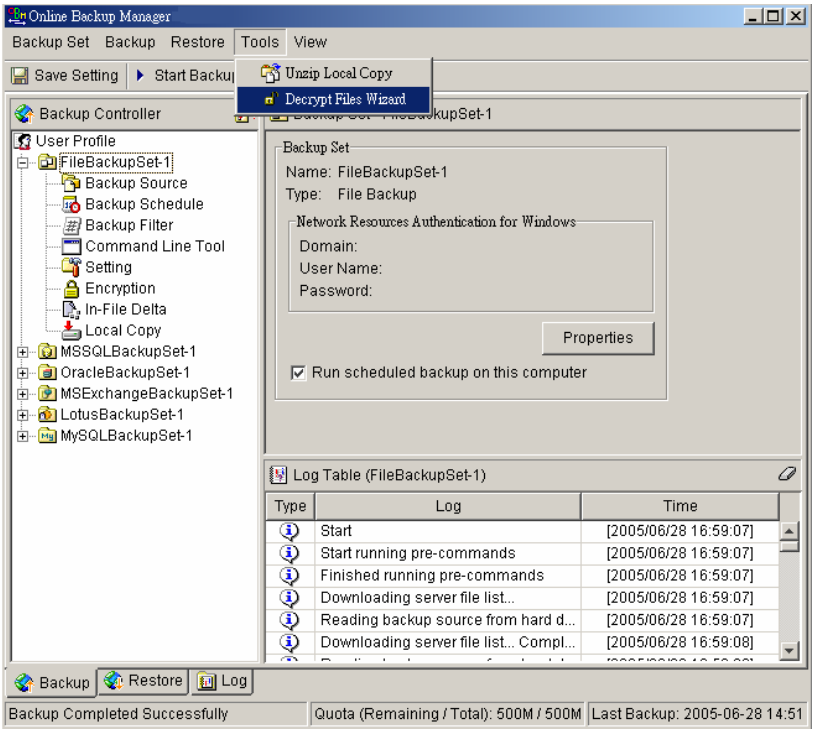
d. Press the [Start] button

6.2 Restore backup files from removable hard disk

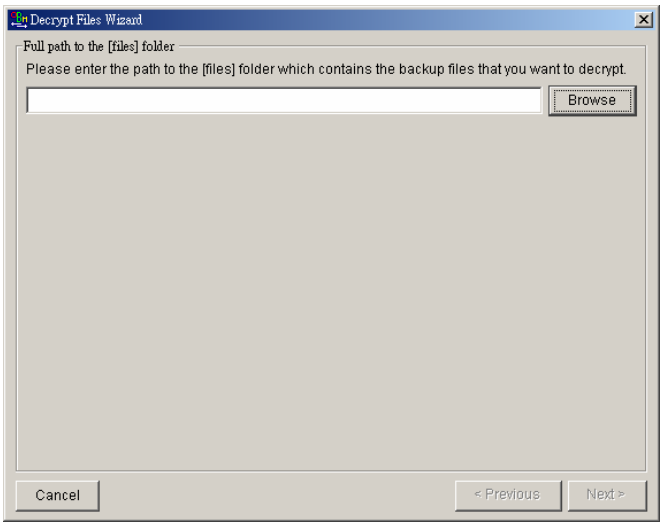
If you want to restore lots of backup files from the backup server and you find it too slow to restore all your backup files from the backup server through the internet. You can ask your backup services provider to send you all your backup files in removable hard disk (or CD/DVD). However, all backup files stored on backup server are in encrypted format. You need to decrypt them back to their original format before you can use them. To decrypt your backup files from removable media, please do the followings:

i. Open DataboksOBM from the System Tray

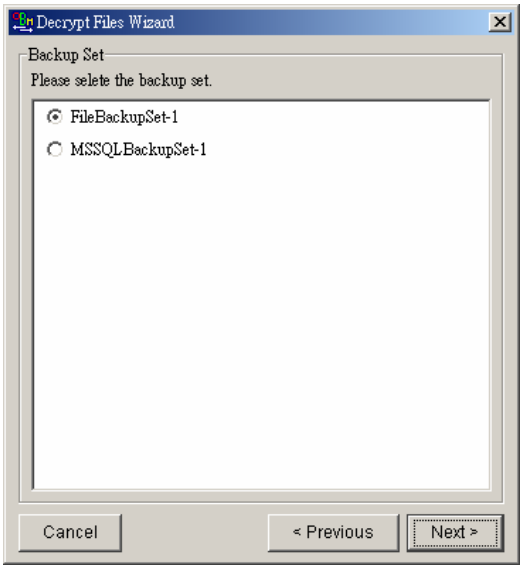
ii. Select the [Tools] -> [Decrypt Files Wizard] from the menu



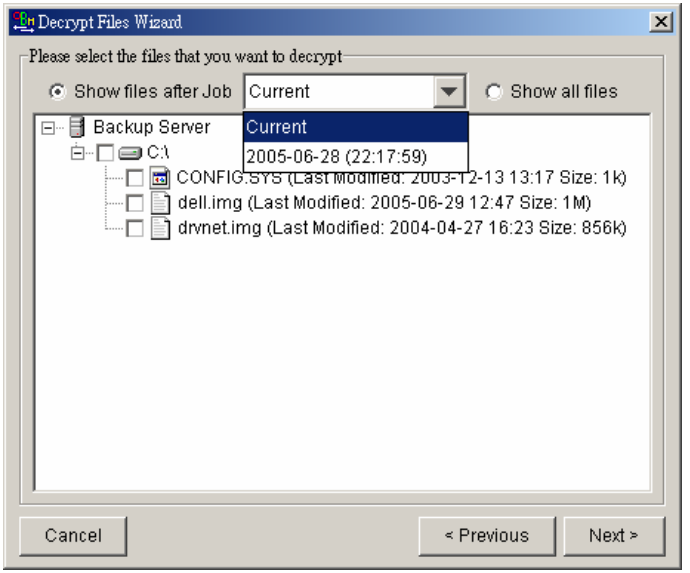
iii. Use the [Browse] button to locate the "files" directory (provided by your backup provider in removable hard disk or DVD) which contains the backup files that you want to decrypt


Decrypt Files Wizard
Full path to the [files] folder
Please enter the path to the [files] folder which contains the backup files that you want to decrypt.
Browse
Cancel
< Previous
Next >

iv. If you have more than one backup set under the "files" directory, select the [Backup Set] which contains the backup files that you want to decrypt

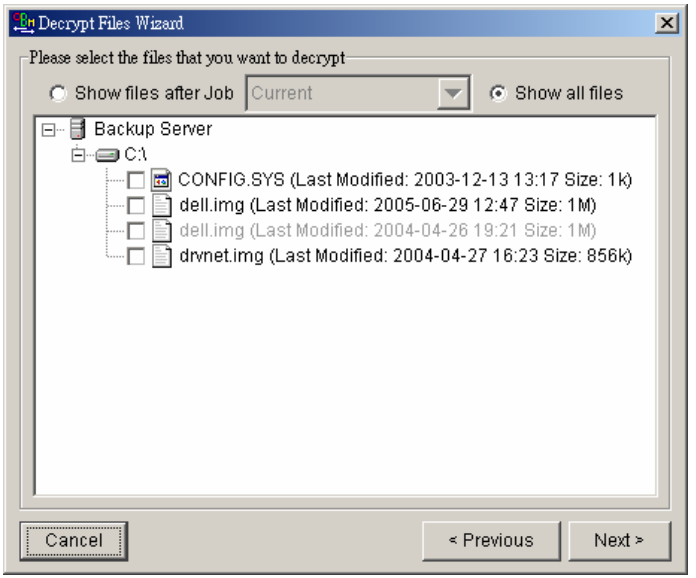


v. Select the snapshot of your backup files that you would like to restore from the removable media by using [Show files after Job] drop down list

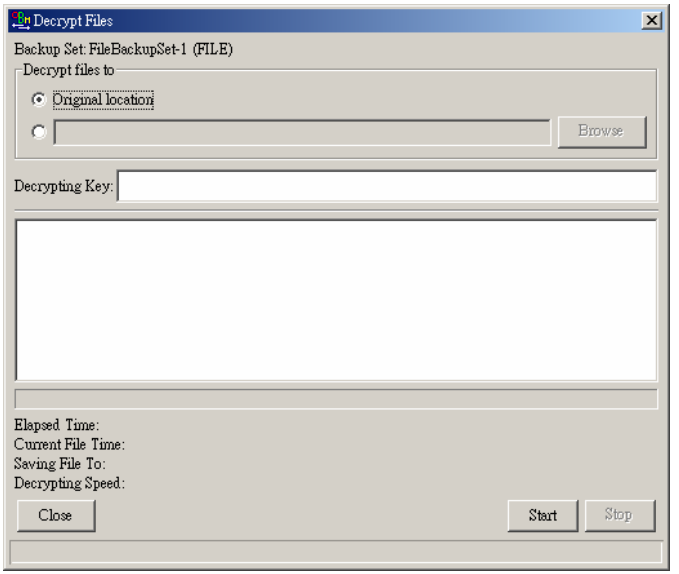


vi. If you want to see all different versions all files (shown as gray below), just choose the [Show all files] radio button on the [Decrypt Files Wizard] dialog.

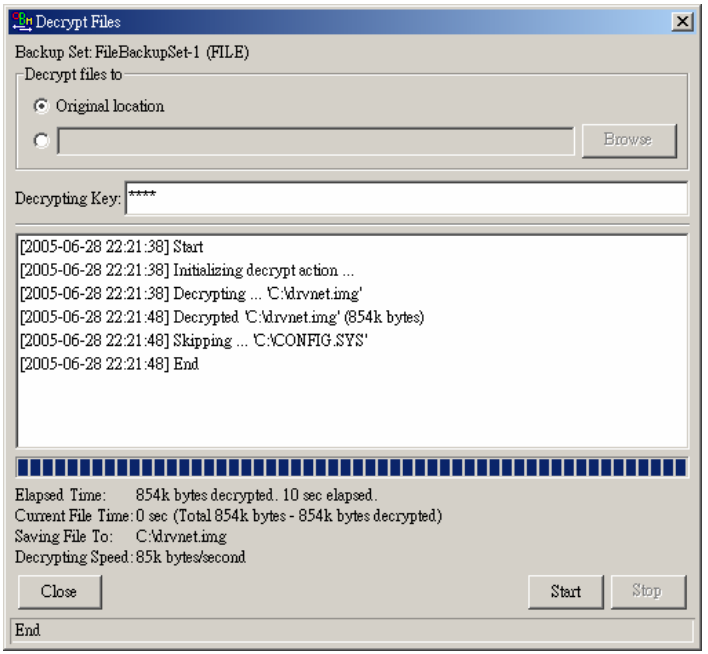
Files, which are shown in gray and marked as deleted below, e.g. dell.img (delete), are being stored in the retention area on the removable media (but you can still restore these files).


Decrypt Files Wizard
Please select the files that you want to decrypt
Show files after Job
Current
Show all files
Backup Server
C:\
CONFIG.SYS (Last Modified: 2003-12-13 13:17 Size: 1k)
dell.img (Last Modified: 2005-06-29 12:47 Size: 1M)
dell.img (Last Modified: 2004-04-26 19:21 Size: 1M)
drvnet.img (Last Modified: 2004-04-27 16:23 Size: 856k)
Cancel
< Previous
Next >

vii. Enter the directories to which you want backup files to be restored in the [Decrypt Files to] section and enter the [Decrypting Key] (the same as the encrypting key of this backup set)



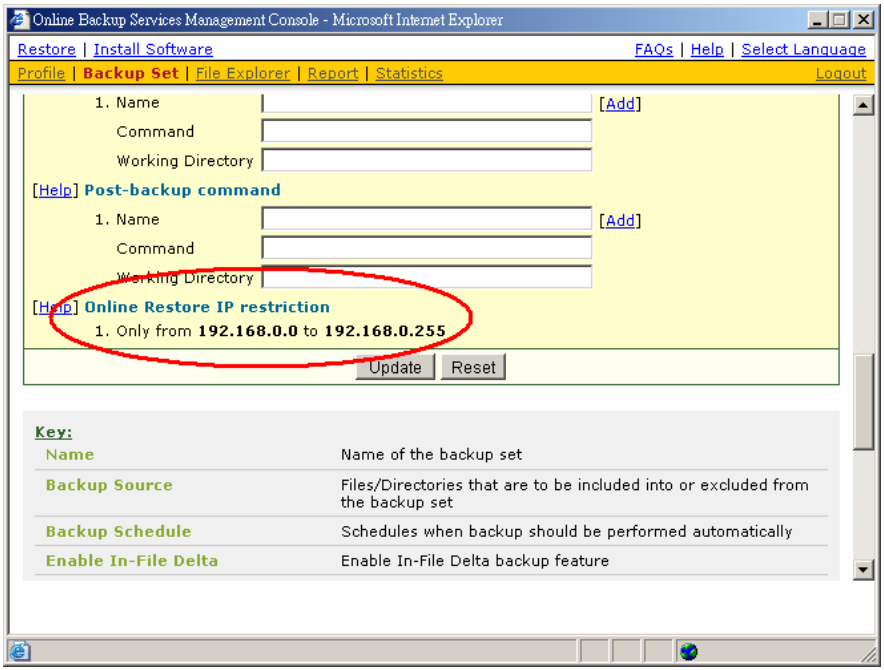
viii. Press the [Start] button



6.3 Restrict restoring files by IP addresses

Online file restoring operation can be restricted by IP addresses. You can ask your backup provider to restrict online file restoring for your backup sets by IP addresses to allow people from authorized IP addresses to restore files from the backup server. To check if online file restore of any backup set is restricted this way, please take a look at the web interface of DataboksOBS, [Online Backup Services Management Console] -> [Backup Set] -> [Online Restore IP restriction] (shown below).

Users are not allowed to update the [Online Restore IP restriction] directly. Please ask your backup services provider to do the changes for you.


Online Backup Services Management Console - Microsoft Internet Explorer
Restore | Install Software
FAQs | Help | Select Language
Profile | Backup Set | File Explorer | Report | Statistics
Logout
1. Name
[Add]
Command
Working Directory
[Help] Post-backup command
1. Name
[Add]
Command
Working Directory
[Help] Online Restore IP restriction
1. Only from 192.168.0.0 to 192.168.0.255
Update
Reset
Key:
Name
Name of the backup set
Backup Source
Files/Directories that are to be included into or excluded from the backup set
Backup Schedule
Schedules when backup should be performed automatically
Enable In-File Delta
Enable In-File Delta backup feature

7 In-File Delta Technology

The chapter describes what in-file delta technology is and how in-file delta can be used to backup large database files (e.g. a 10GB Outlook.pst file) without uploading the whole database file everyday.

7.1 Overview

In-file delta technology is an advanced data block matching algorithm which has the intelligence to pick up changes (delta) of file content between two files when one of the files is not accessible and use the delta information between two files to rebuild one file from the other. Using this algorithm, daily backing up of large file (e.g. a 10GB Outlook.pst file) over low-speed internet connection is made possible because it requires only the changes of information (should be marginal) since last backup to be sent over a low-speed internet connection to complete the backup of a large file (here we assume that the full backup of the file has been saved on the backup server already).

This is what would happen to the backup of a 10GB Outlook.pst file when it is backed up by DataboksOBM with in-file delta technology.

i. The whole files (10GB), along with its checksum (128-bit) file, are backed up to the backup server. This can be done directly through the internet or indirectly using the seed loading utility on a removable hard disk.

ii. When backup runs again later (normally the next day), DataboksOBM will download a checksum listing of all data blocks of the full backup file from the backup server and use it to pick up all changes that have been made to the current Outlook.pst file from the first full backup.

iii. Changes detected are then saved in a delta file which is uploaded to the backup server. (This delta file is assumed to be small because the content of all PST files doesn't change lot of even after it has been updated)

iv. Subsequent backups of this 10GB Outlook.pst file will go through step ii and step iii again. As explained, only a small delta file will be uploaded to the backup server.

v. With in-file delta technology, daily backing up of large file over low-speed internet connection is now possible

Example 1: If you are adding 200MB to Outlook.pst everyday, the first delta backup will upload a 200MB delta file and the next delta backup will upload a 400MB delta file. This will go on until Day 50 when the delta file required to be backed up reached 10GB. This delta file size (10GB) is now is 50% of the Outlook.pst which is now 20GB (remember that you have added 100MB to this file everyday). If the [Delta Ratio] is set to be 50% (default), the whole Outlook.pst file will be uploaded again.

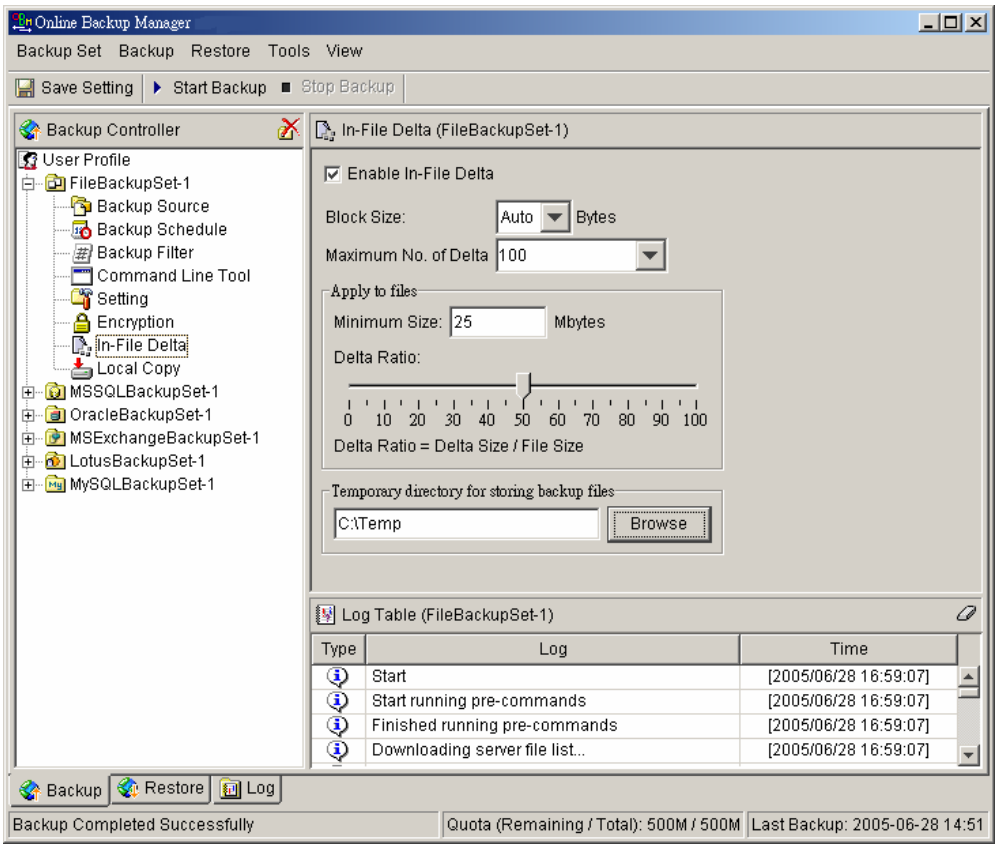
Example 2: If you are adding 50MB to Outlook.pst everyday, the first delta backup will upload a 50MB delta file and the next delta backup will upload a 100MB delta file. This will go on until Day 100 because it is the [Maximum number of delta] (default) allowed in this backup set and the whole Outlook.pst file will be uploaded again.

All delta files are generated with respect to changes made since the last full backup file (i.e. differential backup). This means that only last full backup file and the last delta file are required to

restore the latest snapshot of a backup file. This means that other intermediate delta files are only required if you want to restore other snapshots of a backup file.

In-File delta does differential backup rather than incremental backup. It is designed this way so that a corrupted delta file would only make one particular version of a backup file non-recoverable and all other backups created by other delta files of the same file would still be intact.

The full backup file, its checksum file and the last delta file uploaded (if more than one delta files have been uploaded to the backup server) are always stored in the data area. This means that these files are not affected by the setting of the retention policy and will always be kept on the backup server. This is done this way because all these files are required to get the latest snapshot of the backup file and they should not be removed from the backup server by the retention area cleanup routine. All other intermediate delta files are stored in the retention area.



7.2 Block Size

The block size defines the size of data block being used to detect changes between last full backup file and the file sitting on the local computer right now. In general, the smaller the block size, the more likely a matched data block can be found between the last full backup file and the file on local computer. It, therefore, produces in a smaller delta file but it would require more processing power to detect these changes. On the other hand, in-file delta backup running with larger block

size will run faster but this will generally produce a larger delta file.

In most case, the default setting [Auto] will choose the optimal block size for each file (depending on the size of the file) for you.

7.3 Maximum Number of Delta

The [Maximum number of delta] setting defines the maximum number of delta files from the same full backup file to be generated and backed up to the backup server before a full backup (the whole file) of this file is uploaded to the backup server instead.

For example, if you have created 100 delta files from the full backup file already and the [Maximum number of delta] setting is 100, the next backup will upload a full backup file (the whole file) instead of just the delta file. However, if the [Maximum number of delta] setting is unlimited, it will keep generating delta files and uploading these delta files to the backup server until any of the other delta setting conditions force a full backup (e.g. delta ratio is exceeded). This setting is here to make sure that there will always be a full backup file after a certain number of delta files have been generated.

7.4 Minimum File Size

The [Minimum File Size] setting defines the smallest file size a file must have before the use and application of in-file delta backup technology.

If the size of a file that is being backed up is smaller than the [Minimum File Size] setting, in-file delta backup technology won't be applied to this file and the whole file, instead of just the delta file, will be uploaded to the backup server. It is not necessary to perform in-file delta backup on small files because backing up the whole file doesn't take too long anyway. Backing up the whole file instead reduces the time required to restore a backup file.

7.5 Delta Ratio

The [Delta Ratio] setting is defined to be the size of a delta file divided by the size of its full backup file (i.e. the percentage of changes detected between the last full backup file and the current file).

If delta ratio calculated from the size of the generated delta file and the size of the full backup is greater than the [Delta Ratio] setting, the whole file, instead of just the delta file, will be backed up to the backup server. It is done this way because the difference between backing up the whole file and the delta file is not significant and it is better to upload the whole file instead to reduce the time required to restore the file.

The default setting of [Delta Ratio] is 50%. This means that if more than 50% changes have been detected, the whole file, instead of just the delta file, will be backed up and uploaded to the backup server.

7.6 Temporary Directory

The [Temporary Directory] setting defines a temporary directory where DataboksOBM can be used to save its temporary files during the delta file generation operation. Please set this directory to a

partition with lots of free space.

8 Backup/Restore Oracle 8i/9i

This chapter will describe in details how DataboksOBM backup your Oracle 8i/9i and how you can restore an Oracle 8i/9i database using the backup files.

8.1 Requirements

i. DataboksOBM must be installed onto the computer that can connect to your Oracle 8i/9i server using TCP/IP protocol.

ii. Data from Oracle 8i/9i database will be backed up to a temporary directory before they are sent to Databoks Offsite Backup Server. Please make sure you have sufficient space on your computer to store these data when you run the backup job.

iii. Database must be in archived log mode

To switch to archived log mode and enable automatic log archiving, please do the following:

a. Set the parameters below in the PFILE to enable automatic archiving

```
log_archive_dest = [directory where archived logs will be stored]
log_archive_format = ARCH%S.LOG
log_archive_start = TRUE
```

b. Switch to archived log mode

```
SVRMGRL> connect internal;
SVRMGRL> startup mount;
SVRMGRL> alter database archivelog;
SVRMGRL> alter database open;
```

c. Oracle JVM is enabled

To enable Oracle JVM for Oracle 8i/9i, please do the following:

1. Please make sure shared pool size is larger than 50MB and java pool size is larger than 20MB in the PFILE. For example:

```
java_pool_size = 20971520
shared_pool_size = 52428800
```

2. Run the scripts below

Oracle 8i	Oracle 9i
SVRMGRL> connect internal SVRMGRL> @?/javavm/install/initjvm.sql; SVRMGRL> @?/rdbms/admin/catalog.sql; SVRMGRL> @?/rdbms/admin/catproc.sql; SVRMGRL> @?/javavm/install/initdbj.sql;	SQL> connect sys/change_on_install as sysdba SQL> @?/javavm/install/initjvm.sql; SQL> @?/xdk/admin/initxml.sql; SQL> @?/xdk/admin/xmlja.sql; SQL> @?/rdbms/admin/catjava.sql;

iv. JAVASYSPRIV role is granted to system account

You can grant this role to system account by executing:

SQL> grant JAVASYSPRIV to system;

8.2 Overview

DataboksOBM will backup your Oracle database by taking the following steps.

i. Connect to the Oracle database using SQL*NET over TCP/IP

ii. Run all Pre-Commands of this backup set

iii. If the backup type to run is [Database Backup type],

a. all data files in each of the tablespace(s) selected are copied to the temporary directory specified by this backup set

b. if there are temporary files in the database, the script to re-create the temporary files are generated to a file located in the temporary directory specified by this backup set

c. all non-default initialization parameters will be spooled to an initializing file located in the temporary directory specified by this backup set

d. all control files will be copied to the temporary directory specified by this backup set

e. all archived log files will be copied to the temporary directory specified by this backup set

iv. If the backup type to run is [Archived Log Backup type],

a. all archived log files will be copied to the temporary directory specified by this backup set

v. Run all Post-Commands of this backup set

vi. Upload all files copied to the temporary directory to the Databoks Offsite Backup Server

Note:
If your Oracle database is running on Windows, please install DataboksOBM onto the company running the Oracle database if DataboksOBM is to backup this Oracle database. This would shorten the time required to backup the Oracle database.

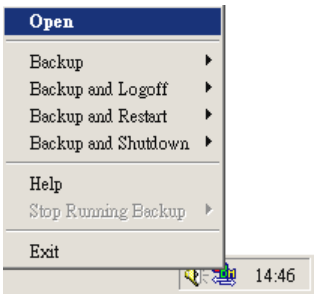
8.3 How to backup an Oracle Database

Please follow the instructions below to backup your Oracle database to the Databoks Offsite Backup Server.

i. Install DataboksOBM onto your computer

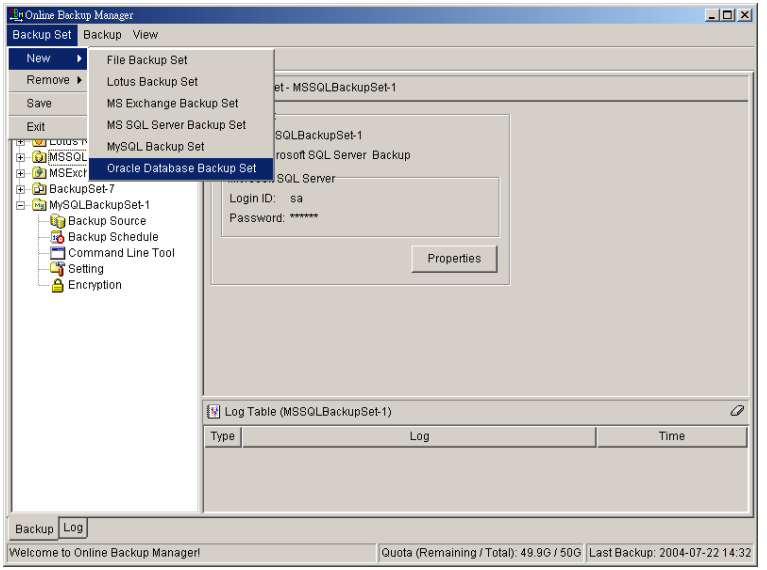
ii. Open DataboksOBM

Right click DataboksOBM icon available in the system tray and choose [Open]

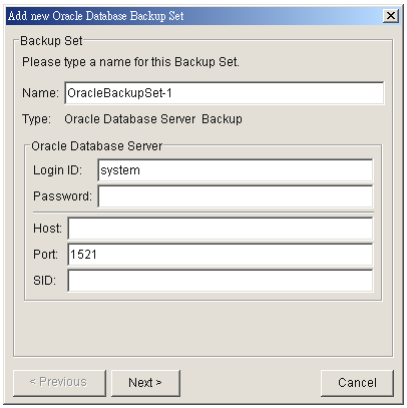


iii. Create a backup set

a. From the Menu, Choose [Backup Set] -> [New] -> [Oracle Database Backup Set]

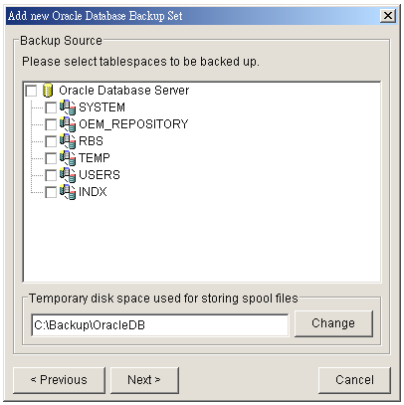


b. Enter a name for your backup set



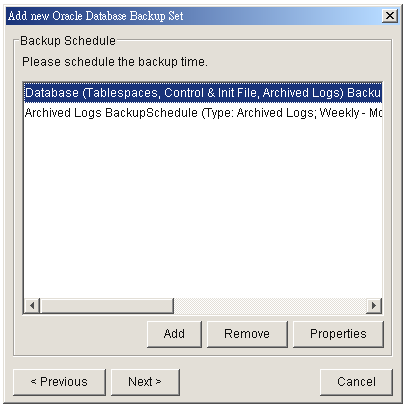
c. Enter the system password, the Oracle Database Server Host Name, TNS Port and SID

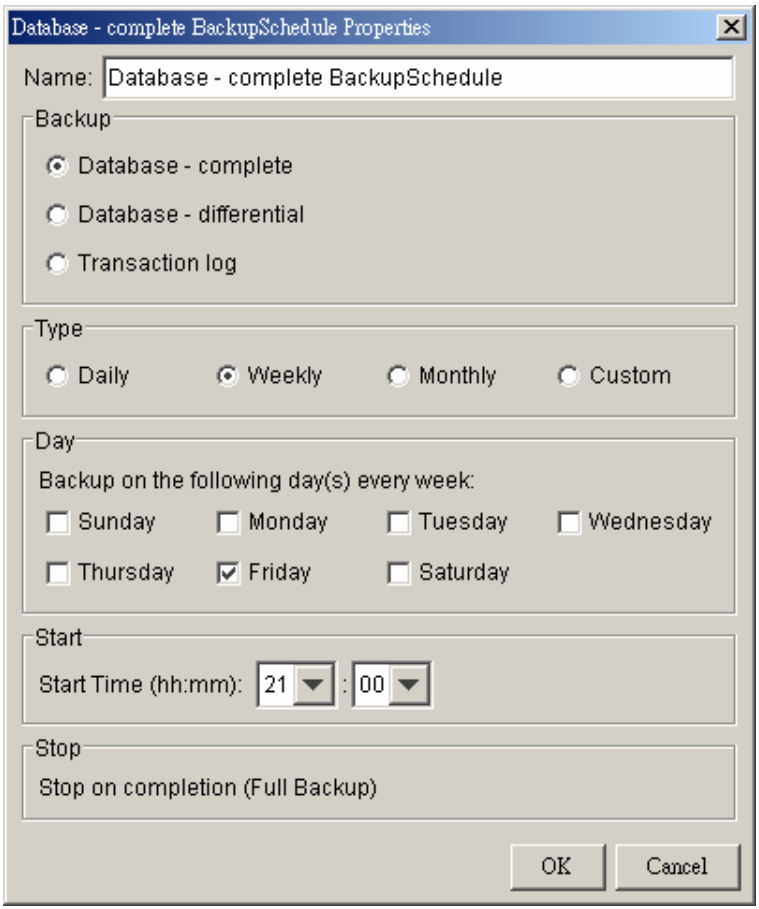
d. Select the tablespace(s) you want to backup



e. Enter a temporary location to store the database file(s) before they are sent to an Databoks Offsite Backup Server

f. Set the backup schedule for database backup and archived log backup

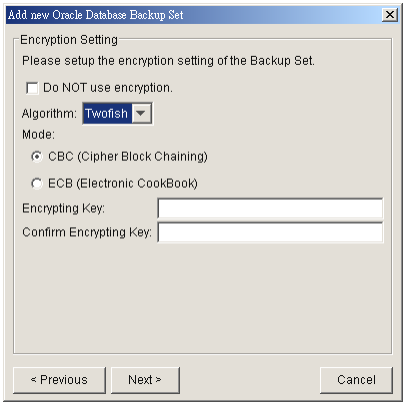




Note: You can have more than one schedule in a backup set, i.e. you can perform intra-day

transaction log backup by adding more than one daily transaction log backup schedule to your backup set.

g. Set the encryption algorithm, encryption mode and encrypting key for this backup set

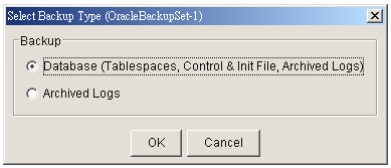


Hint: For maximum security, please select AES (Advanced Encryption Standard) Algorithm, CBC (Cipher Block Chaining) mode and use an encrypting key with more than 8 characters.

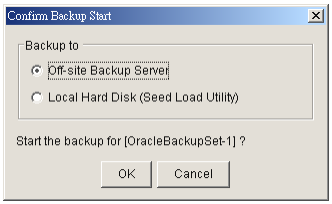
iv. Run Backup

a. Select the backup set you want to run on the left panel and press the [Start Backup] button (►)

b. Select the backup type (e.g. Database Backup, Archived Log Backup) you would like to perform



c. Select [Off-site Backup Server] to start backing up your files to an Databoks Offsite Backup Server.



8.4 How to restore an Oracle Database

Please follow the instructions below to restore your Oracle 8i/9i databases from an Databoks Offsite Backup Server.

i. Download the backup files from the Databoks Offsite Backup Server

Please refer to the [Quick Start - Backup File] section for information on how to download backup files from Databoks Offsite Backup Server.

ii. Put all data files back to their original locations

iii. Control files, data files and archived logs are stored on Databoks Offsite Backup Server along with their full path information. You just need to put all these files back to their original locations when performing a database restore.

iv. Put the PFILE back to its default location

Oracle 8i: $ORACLE_HOME/dbs/init<SID>.ora
Oracle 9i: $ORACLE_HOME/admin/<SID>/pfile/init.ora

v. Restore Database

(if Oracle 8i) Use Server Manager to restore you database by doing the following:

a. Run Oracle Server Manager (svrmgrl)

b. Connect to the target database

c. Startup mount

d. Reapply all transactions from the archived log files

e. Open database

Oracle 8i Example:

```
$ svrmgrl

SVRMGRL> connect internal

SVRMGR> startup mount;
ORACLE instance started.
Total System Global Area               95874448 bytes
Fixed Size                                64912 bytes
Variable Size                          52744192 bytes
Database Buffers                       40960000 bytes
Redo Buffers                            2105344 bytes
Database mounted.

SVRMGRL> recover database using backup controlfile
ORA-00279: change 419671 generated at 06/14/03 02:51:49 needed for thread 1
ORA-00289: suggestion : /data/ora815/vin/archive/ARCH0000000225.LOG
ORA-00280: change 419671 for thread 1 is in sequence #225
ORA-00278: log file '/data/ora815/vin/archive/ARCH0000000224.LOG' no longer needed for this
recovery
Specify log: {<RET>=suggested | filename | AUTO | CANCEL}
AUTO
Log applied.
. . . . . .
ORA-00279: change 547222 generated at 06/18/03 19:58:26 needed for thread 1
ORA-00289: suggestion : /data/ora815/vin/archive/ARCH0000000384.LOG
ORA-00280: change 547222 for thread 1 is in sequence #384
ORA-00278: log file '/data/ora815/vin/archive/ARCH0000000383.LOG' no longer needed for this
recovery
ORA-00308: cannot open archived log '/data/ora815/vin/archive/ARCH0000000384.LOG'
ORA-27037: unable to obtain file status
Linux Error: 2: No such file or directory
Additional information: 3

SVRMGR> recover database using backup controlfile until cancel
ORA-00279: change 547222 generated at 06/18/03 19:58:26 needed for thread 1
ORA-00289: suggestion : /data/ora815/vin/archive/ARCH0000000384.LOG
ORA-00280: change 547222 for thread 1 is in sequence #384
Specify log: {<RET>=suggested | filename | AUTO | CANCEL}
CANCEL
Media recovery cancelled.
SVRMGR> alter database open resetlogs;
Statement processed.
```

(if Oracle 9i) Use Recovery Manager to restore you database by doing the following:

a. Run Oracle Server Manager (rman)

b. Connect to the target database

c. Startup mount

d. Reapply all transactions from the archived log files to the last sequence

e. Open database

Oracle 9i Example:

```
C:\>rman nocatalog

Recovery Manager: Release 9.2.0.1.0 - Production

Copyright (c) 1995, 2002, Oracle Corporation.  All rights reserved.
```

```
RMAN> connect target

connected to target database (not started)

RMAN> startup mount

connected to target database (not started)
Oracle instance started
database mounted

Total System Global Area    269556596 bytes

Fixed Size                    453492 bytes
Variable Size              243269632 bytes
Database Buffers            25165824 bytes
Redo Buffers                  667648 bytes

RMAN> recover database until sequence=63 thread=1;

Starting recover at 24-JUN-03
allocated channel: ORA_DISK_1
channel ORA_DISK_1: sid=11 devtype=DISK

starting media recovery

archive log thread 1 sequence 56 is already on disk as file
C:\ORACLE\ORADATA\VIN\ARCHIVE\1_56.DBF
archive log filename=C:\ORACLE\ORADATA\VIN\ARCHIVE\1_56.DBF thread=1 sequence=56
archive log filename=C:\ORACLE\ORADATA\VIN\ARCHIVE\1_57.DBF thread=1 sequence=57
archive log filename=C:\ORACLE\ORADATA\VIN\ARCHIVE\1_58.DBF thread=1 sequence=58
archive log filename=C:\ORACLE\ORADATA\VIN\ARCHIVE\1_59.DBF thread=1 sequence=59
archive log filename=C:\ORACLE\ORADATA\VIN\ARCHIVE\1_60.DBF thread=1 sequence=60
archive log filename=C:\ORACLE\ORADATA\VIN\ARCHIVE\1_61.DBF thread=1 sequence=61
archive log filename=C:\ORACLE\ORADATA\VIN\ARCHIVE\1_62.DBF thread=1 sequence=62
media recovery complete
Finished recover at 24-JUN-03

RMAN> alter database open resetlogs;

database opened
```

9 Backup/Restore Microsoft SQL Server 7.0 / 2000

This chapter will describe in details how to use DataboksOBM to backup your Microsoft SQL Server 7.0 / 2000 server and how you can restore your Microsoft SQL Server 7.0 / 2000 server from the backup files.

9.1 Requirements

i. DataboksOBM must be installed onto the computer running Microsoft SQL Server.

ii. Data from Microsoft SQL Server will be backed up to a temporary directory before they are sent to Databoks Offsite Backup Server. Please make sure you have sufficient space on your computer to store these data when you run the backup job.

9.2 Overview

DataboksOBM will backup your Microsoft SQL Server database(s) by taking the following steps:

i. Before running any backup activities, DataboksOBM will run all Pre-Commands of the backup set.

ii. For each database that is to be backed up, DataboksOBM will issue a database / transaction log backup command to Microsoft SQL Server to backup each database to a Microsoft SQL Server database backup file (*.bak file) and save it in the temporary directory you specified.

iii. After all *.bak files have been spooled to the temporary directories, DataboksOBM will run all Post-Commands of the backup set.

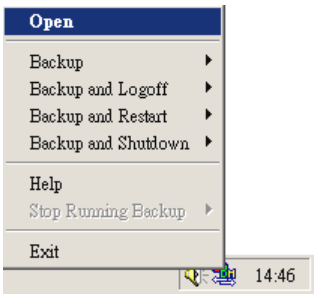
iv. Upload all files copied to the temporary directory to the Databoks Offsite Backup Server.

9.3 How to backup Microsoft SQL Server database(s)

Please follow the instructions below to backup your Microsoft SQL Server databases using DataboksOBM.

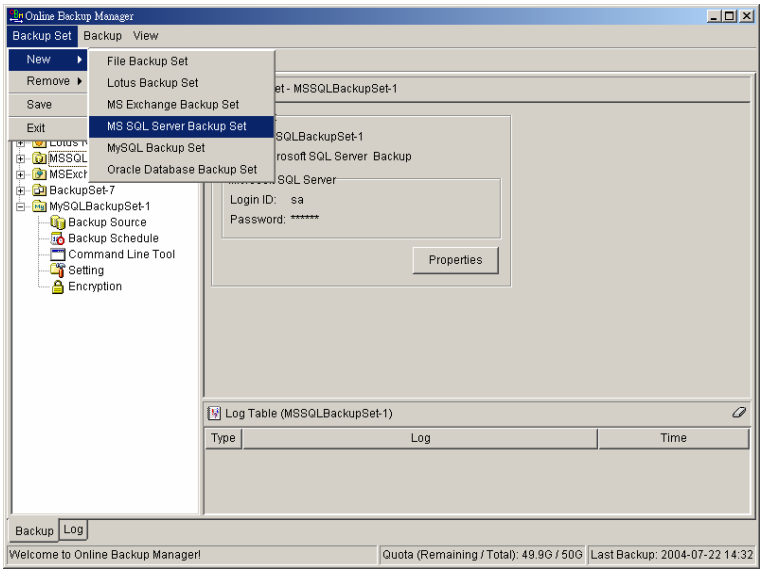
v. Open DataboksOBM

Right click DataboksOBM icon available in the system tray and choose [Open]

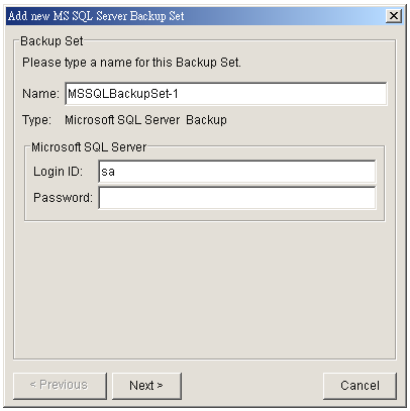


vi. Create a backup set

a. From the Menu, Choose [Backup Set] -> [New] -> [MS SQL Server Backup Set]

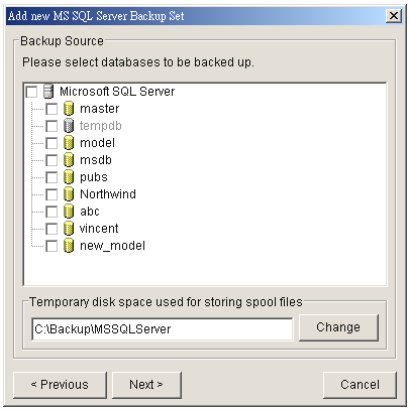


b. Enter a name for your backup set



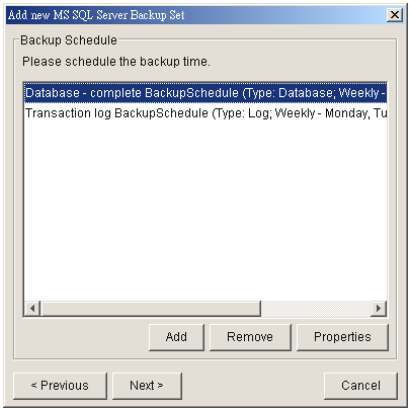
c. Enter the Microsoft SQL Server administrator username and password

d. Select the database(s) you want to backup



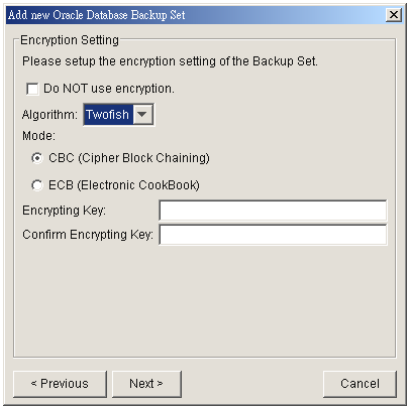
e. Enter a temporary location to store the backup files before they are sent to an Databoks Offsite Backup Server

f. Set the backup schedule for full database backup and transaction log backup



(Note: You can have more than one schedule in a backup set, i.e. you can perform intra-day transaction log backup by adding more than one daily transaction log backup schedule to your backup set)

g. Set the encryption algorithm, encryption mode and encrypting key for this backup set

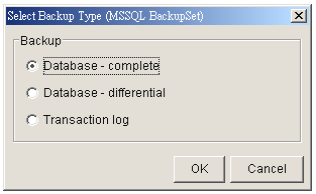


(Hint: For maximum security, please select AES (Advanced Encryption Standard) Algorithm, CBC (Cipher Block Chaining) mode and use an encrypting key with more than 8 characters.)

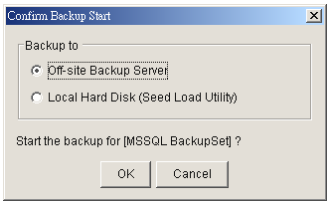
vii. Run Backup

a. Select the backup set you want to run on the left panel and press the [Start Backup] button (►)

b. Select the backup type (e.g. Complete, Differential, Transaction Log) you would like to perform



c. Select [Off-site Backup Server] to start backing up your files to an Databoks Offsite Backup Server.



9.4 How to restore Microsoft SQL Server database(s)

Please follow the instructions below to restore your Microsoft SQL Server databases from an Databoks Offsite Backup Server.

i. Download the backup files (.bak) from the Databoks Offsite Backup Server

Please refer to the [Quick Start - Backup File] section for information on how to download backup files from Databoks Offsite Backup Server.

ii. Open Microsoft SQL Enterprise Manager

You can open Microsoft SQL Enterprise Manager from [Start Menu] -> [Program] -> [Microsoft SQL Server] -> [Enterprise Manager]

iii. (Optional) Restore "master" database

You need to restore "master" database if you:

a. are rebuilding all your databases from scratch

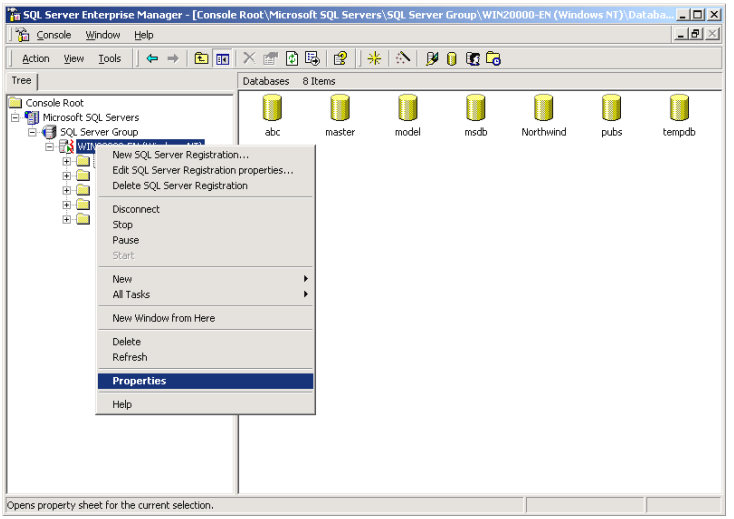
b. have changing any server-wide or database configuration options
c. have added logins or other login security-related operations.
d. have created or removed logical backup devices.
e. have configured the server for distributed queries and remote procedure calls, such as adding linked servers or remote logins.

You do not need to restore your master database if you just want to restore a user database. For more information on Microsoft SQL Server "master" database, please visit http://www.microsoft.com/sql/.

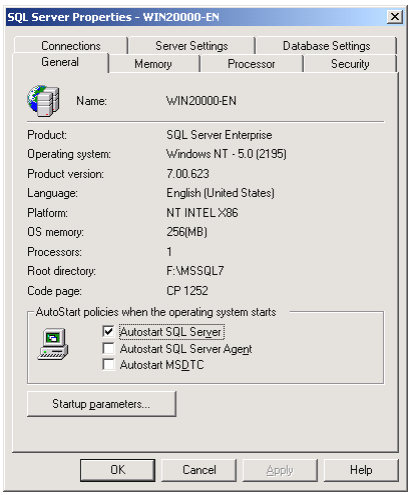
To restore "master" database, please do the following:

a. Start Microsoft SQL Server in "Single User Mode"

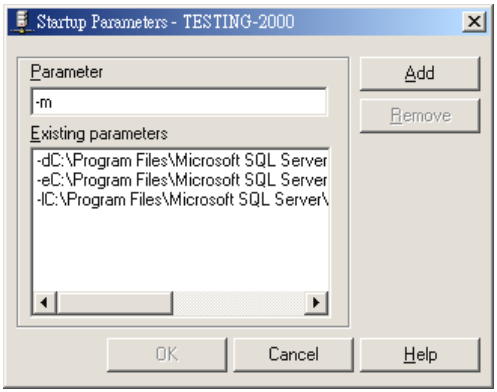
1. Right click your Microsoft SQL Server and select [Properties]



2. Press the [Startup Parameters] button

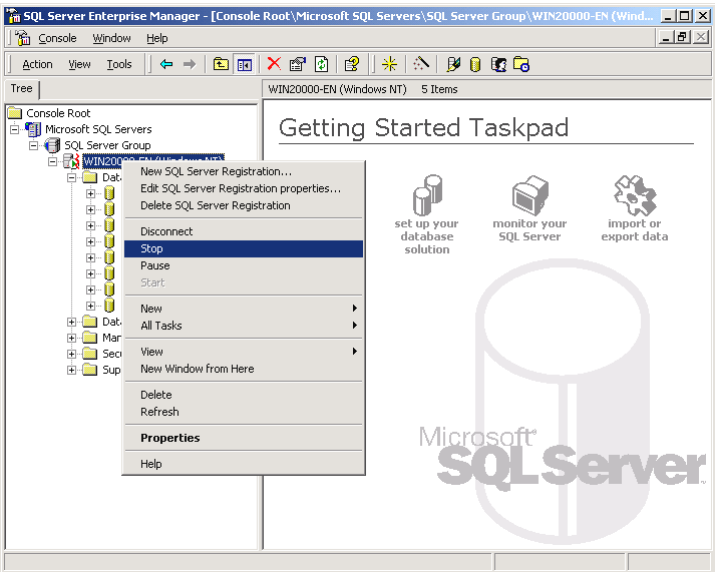


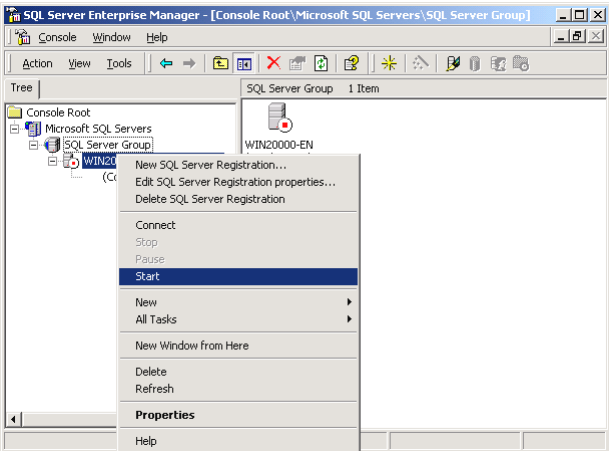
3. Add a "-m" parameter to the [Startup Parameters]



4. Restart Microsoft SQL Server

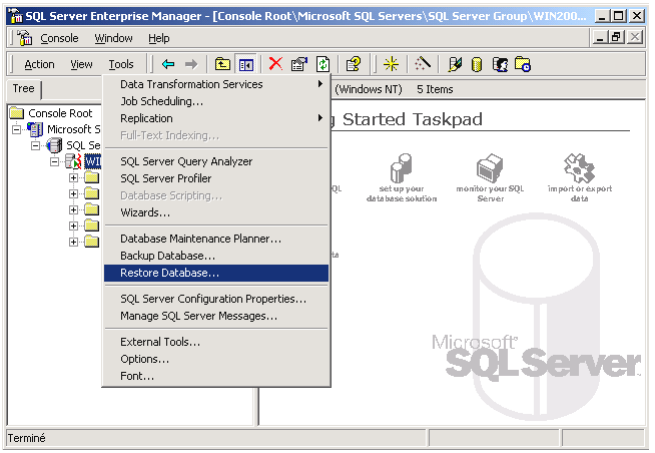
From [Enterprise Manager], right click your Microsoft SQL Server and select [Stop] and then [Start].





b. Restore "master" database

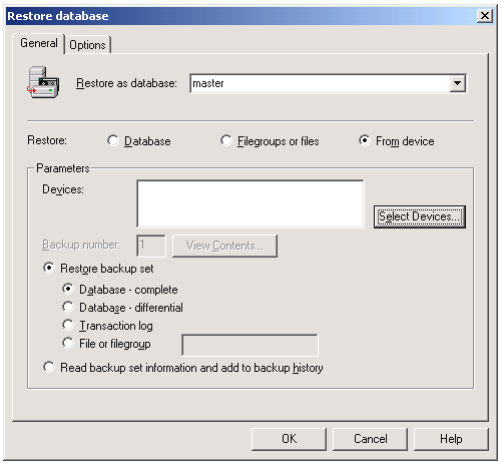
1. From [Enterprise Manager] -> [Tools] -> [Restore Database]



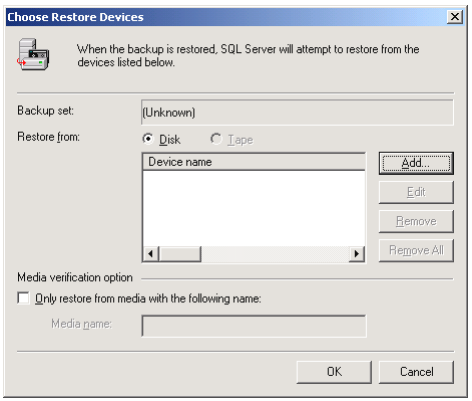
2. Select [master] in the [Restore as database] drop down list

3. Select the [From device] radio button.

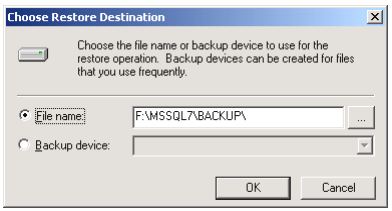
4. Press the [Select Devices] button.



5. From the [Choose Restore Devices], press the [Add] button.



6. From the [Choose Restore Destination] panel, press the [...] button to choose your master backup (*.bak) from your backup files


Choose Restore Destination
Choose the file name or backup device to use for the restore operation. Backup devices can be created for files that you use frequently.
File name:
F:\MSSQL7\BACKUP\
Backup device:
OK
Cancel

7. Press the [OK] button, to start restoring the "master" database.

c. Restart Microsoft SQL Server in "Normal Mode"

1. Remove "-m" parameter from the [Startup Parameters] as in previous step

2. Restart your Microsoft SQL Server as in previous step

iv. (Optional) Restore "model", "msdb" and "distribution" database

You need to restore "model" database if you have changed the database template of your SQL Server.

You need to restore "msdb" database if you have changed the scheduling information or you want to restore the backup and restore history of your databases.

You need to restore "distribution" database if you are running the replication components of SQL Server.

You do not need to restore these databases if you just want to restore a user database. For more information on Microsoft SQL Server "model", "msdb" and "distribution" database, please visit http://www.microsoft.com/sql/.

You need to restore each of these databases one by one. To restore any of these databases, please do the following:

a. From [Enterprise Manager] -> [Tools] -> [Restore Database]

b. Select the database to be restored in the [Restore as database] drop down list

c. Select the [From device] radio button.

d. Press the [Select Devices] button

e. Press the [...] button to choose your backup files (*.bak) for the database to be restored

f. Press the [OK] button

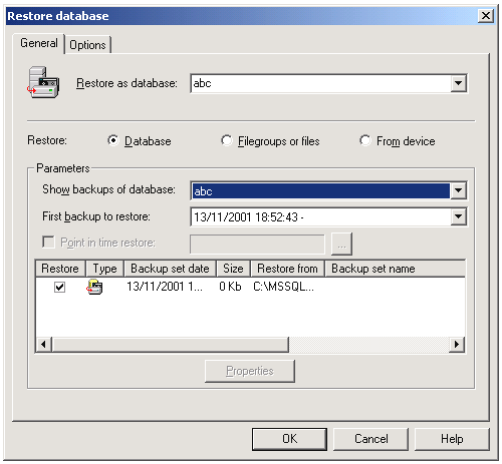
v. Restore user database(s)

For each of the database you would like to restore,

a. From [Enterprise Manager] -> [Tools] -> [Restore Database]

b. Select the database to be restored in the [Restore as database] drop down list

c. Select the [Database] radio button.



d. From the [Show backups of database] drop down list, select the database to be restored

e. From the [First backup to restore] drop down list, select the snapshot of the database you would like to restore to.

You can restore your database to the snapshot of your database at any point of the time between the time you did your full backup and the time you did your last subsequent backup.

f. Change the [Restore From] entry

If you backup files (*.bak) are not in the default directory, you need to update the full path to your backup files by pressing the [Properties] button.

g. Press the [OK] button

vi. All database(s) restored successfully

10 Backup/Restore Lotus Domino / Notes

This chapter will describe in details how to use DataboksOBM to backup your Lotus Domino server / Notes client 5 / 6 / 6.5 and how you can restore your Lotus Domino server / Notes client 5 / 6 / 6.5 from the backup files.

10.1 Requirements

i. DataboksOBM must be installed onto the computer running Lotus Domino server / Notes client.

ii. Data from Lotus Domino server / Notes client will be backed up to a temporary directory before they are sent to Databoks Offsite Backup Server. Please make sure you have sufficient space on your computer to store these data when you run the backup job.

iii. Lotus Domino server must runs with archive transaction logging enabled

To set up transaction logging in archive style, please do the following:

a. Ensure that all databases to be logged reside in the Domino data directory, either at the root or in subdirectories.

b. From the Domino Administrator, click the Configuration tab.

a. In the "Use Directory on" field, choose the server's Domino Directory.

b. Click Server Configuration, and then click Current Server Document.

c. Click the Transactional Logging tab.

d. Complete these fields, and then save the document.

Field	Enter
Transactional Logging	Choose Enabled. The default is Disabled.
Log path	Path name location of the transaction log. The default path name is \LOGDIR in the Domino data directory, although it is strongly recommended to store the log on a separate, mirrored device, such as a RAID (Redundant Array of Independent Disks) level 0 or 1 device with a dedicated controller. The separate device should have at least 1GB of disk space for the transaction log. If you are using the device solely for storing the transaction log, set the "Use all available space on log device" field to Yes.
Maximum log space	The maximum size, in MB, for the transaction log. Default is 192MB. Maximum is 4096MB (4GB). Domino formats at least 3 and up to 64 log files, depending on the maximum log space you allocate.

Use all available space on log device	Choose one: • Yes to use all available space on the device for the transaction log. This is recommended if you use a separate device dedicated to storing the log. If you choose Yes, you don't need to enter a value in the "Maximum log space" field. • No to use the default or specified value in the "Maximum log space" field.
Automatic fixup of corrupt databases	Choose one: • Enabled (default). If a database is corrupt and Domino cannot use the transaction log to recover it, Domino runs the Fixup task, assigns a new DBIID, and notifies the administrator that a new database backup is required. • Disabled. Domino does not run the Fixup task automatically and notifies the administrator to run the Fixup task with the -J parameter on corrupt logged databases.
Runtime / Restart performance	This field controls how often Domino records a recovery checkpoint in the transaction log, which affects server performance. To record a recovery checkpoint, Domino evaluates each active logged database to determine how many transactions would be necessary to recover each database after a system failure. When Domino completes this evaluation, it: • Creates a recovery checkpoint record in the transaction log, listing each open database and the starting point transaction needed for recovery • Forces database changes to be saved to disk if they have not been saved already Choose one: • Standard (default and recommended). Checkpoints occur regularly. • Favor runtime. Domino records fewer checkpoints, which requires fewer system resources and improves server run time performance. • Favor restart recovery time. Domino records more checkpoints, which improves restart recovery time because fewer transactions are required for recovery.
Logging style	Choose Archive. The default is Circular.

Notes:
You can only run transaction log backup if you have transaction logging enabled and you are using archive mode. This command does not apply if you have transaction logging enabled not in archive mode or if transaction logging is not enabled at all. If you try to issue it, you will receive an error message.

10.2 Overview

DataboksOBM will backup your Lotus Domino server / Notes client by taking the following steps:

i. Run all Pre-Commands of this backup set

ii. If the backup type to run is [Database Backup type],

   a. all file(s) / database(s) selected are copied to the temporary directory specified by this backup set

   b. the notes.ini file, if selected, will be copied to the temporary directory

   c. only filled log extents will be copied to the temporary directory, and the Domino server is notified of their availability for reuse (for Domino server only)

iii. (for Domino server only) If the backup type to run is [Transaction Log Backup type],

   a. only filled log extents will be copied to the temporary directory, and the Domino server is notified of their availability for reuse

iv. Run all Post-Commands of this backup set

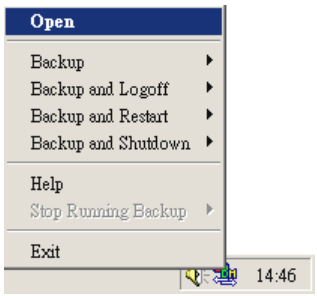
v. Upload all files copied to the temporary directory to the Databoks Offsite Backup Server

10.3 How to backup Lotus Domino / Notes database(s) / file(s)

Please follow the instructions below to backup your Lotus Domino server / Notes client databases / files using DataboksOBM.

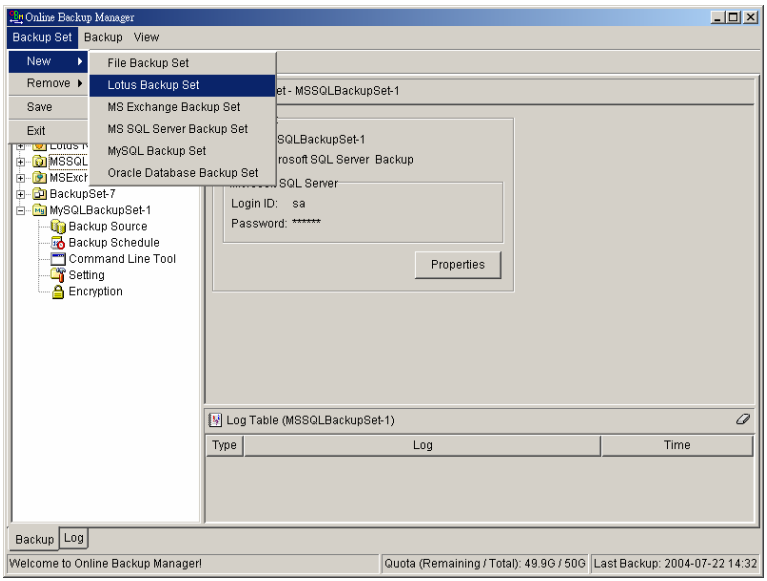
i. Open DataboksOBM

   Right click DataboksOBM icon available in the system tray and choose [Open]

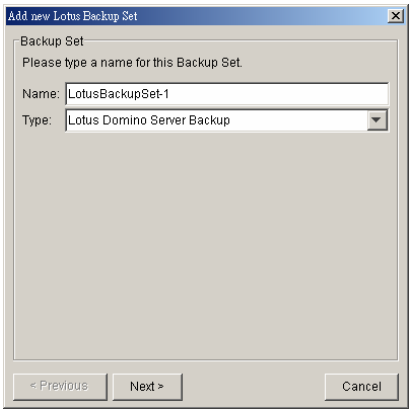


ii. Create a backup set

a. From the Menu, Choose [Backup Set] -> [New] -> [Lotus Backup Set]

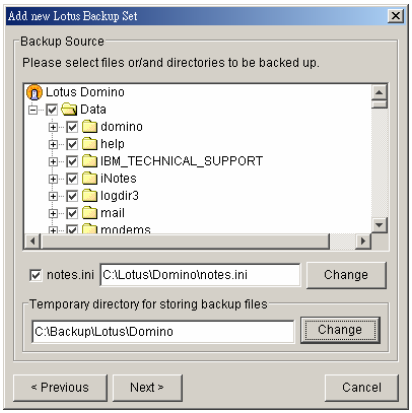


b. Enter a name for your backup set



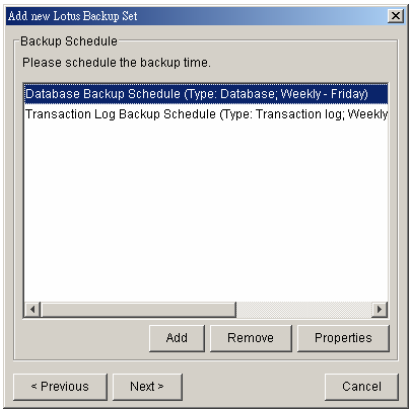
c. Select the Backup Set Type (Lotus Domino Server Backup / Lotus Notes Client Backup)

d. Select the database(s) / file(s) you want to backup



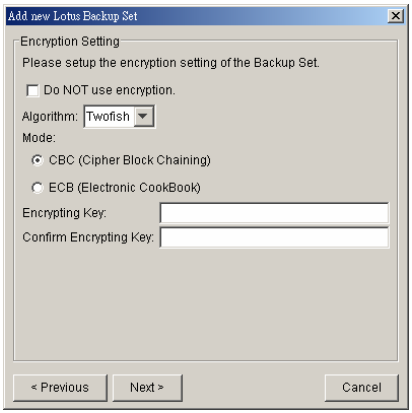
e. Enter a temporary location to store the backup files before they are sent to an Databoks Offsite Backup Server

f. Set the backup schedule for Database Backup



g. Set the backup schedule for Transaction Log Backup (for Domino server only) (Note: You can have more than one schedule in a backup set, i.e. you can perform intra-day transaction log backup by adding more than one daily transaction log backup schedule to your backup set)

h. Set the encryption algorithm, encryption mode and encrypting key for this backup set

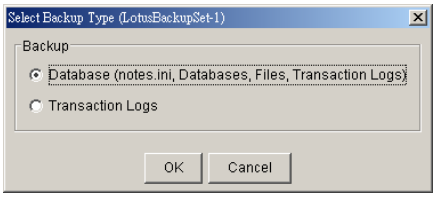


(Hint: For maximum security, please select AES (Advanced Encryption Standard) Algorithm, CBC (Cipher Block Chaining) mode and use an encrypting key with more than 8 characters.)

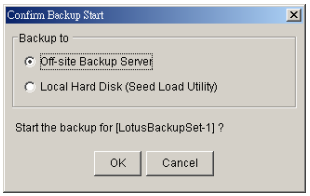
iii. Run Backup

a. Select the backup set you want to run on the left panel and press the [Start Backup] button (►)

b. Select the backup type (e.g. Database, Transaction Log) you would like to perform (for Domino server only)



c. Select [Off-site Backup Server] to start backing up your files to an Databoks Offsite Backup Server.



10.4 How to restore Lotus Domino / Notes database(s) / file(s)

Please follow the instructions below to restore Lotus Domino server / Notes client database(s) / file(s) from an Databoks Offsite Backup Server.

i. Install Lotus Domino server / Notes client back to its original folder (if required)

ii. Install DataboksOBM

Please refer to the [Installation] section for information on how to install DataboksOBM onto your computer.

iii. Copy LotusMediaRecovery.exe from the bin directory (default to C:\Program Files\DataboksOBM\bin) to Lotus Domino installation directory (default to C:\Lotus\Domino)

iv. Shutdown Lotus Domino Server

v. If you want to perform a full domino restore (restore all databases and files):

a. Download the backup files to be restored from the Databoks Offsite Backup Server and save them back to its original location. It includes notes.ini, all backup files from the lotus domino data directory and all archived transaction logs

b. Run LotusMediaRecovery.exe from the Lotus Domino installation directory (e.g. C:\Lotus\Domino\LotusMediaRecovery.exe) and press 'Y' to continue.

For example: C:\Lotus\Domino\> LotusMediaRecovery.exe

This will run media recovery for all databases (*.nsf and mail.box) found under the Lotus data directory (e.g. C:\Lotus\Domino\Data). You should see something similar to the screen below.

Media Recovery Example:

```
C:\Lotus\Domino>LotusMediaRecovery
Media Recovery Utility for Lotus Domino 5.0 or above

Please make sure that you have done the following:
1. Reinstall Lotus Domino on this computer in the same directory
2. Restore Notes.ini to the Lotus Domino installation directory
   (e.g. C:\Lotus\Domino)
3. Restore Domino Data directory back to the directory defined
   in Notes.ini (e.g. C:\Lotus\Domino\Data)
4. Restore all archived transaction logs to the directory defined
   in Notes.ini (e.g. C:\Lotus\Domino\Data\logdir)

Continue ? (Y) or (N) y
Running media recovery ...
Please wait, creating new transaction logs in directory: C:\logdir\
02/12/2003 14:39:19   Recovery Manager: Restart Recovery complete. (0/0
databases needed full/partial recovery)
Media Recovery Replay (122 MB): 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%
02/12/2003 14:39:22   Recovery Manager: Media Recovery complete for
C:\Lotus\Domino\Data\admin4.nsf, last update applied .

 Backup file C:\Lotus\Domino\Data\admin4.nsf recovered.

.....
```

```
Media Recovery Replay (122 MB): 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%
02/12/2003 14:40:57   Recovery Manager: Media Recovery complete for
C:\Lotus\Domino\Data\statrep.nsf, last update applied .

 Backup file C:\Lotus\Domino\Data\statrep.nsf recovered.

C:\Lotus\Domino>
```

c. All content of all database(s) are now rolled forward to the last committed transaction found in the last archived transaction log.

d. Restart Lotus Domino server

vi. If you just want to restore a single database:

a. Download the database file to be restored from the Databoks Offsite Backup Server and save them back to its original location.

b. (optional) If you need to perform media recovery on this database, please download all archived transaction logs and save them back to its original location

c. Run LotusMediaRecovery.exe from the Lotus Domino installation directory with an argument of the full path of database to be restored.

For example, if you want to restore C:\Lotus\Domino\data\admin4.nsf, please run:

C:\Lotus\Domino\> LotusMediaRecovery.exe C:\Lotus\Domino\data\admin4.nsf

You should see something similar to the screen below.

Media Recovery Example:

```
C:\Lotus\Domino>LotusMediaRecovery C:\Lotus\Domino\data\admin4.nsf
Media Recovery Utility for Lotus Domino 5.0 or above

Running media recovery ...
Restart Analysis (0 MB): 100%
02/12/2003 14:42:15   Recovery Manager: Restart Recovery complete. (0/0
databases needed full/partial recovery)
Media Recovery Replay (122 MB): 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%
02/12/2003 14:42:17   Recovery Manager: Media Recovery complete for
C:\Lotus\Domino\data\admin4.nsf, last update applied 01/12/2003 00:02:42.

 Backup file C:\Lotus\Domino\data\admin4.nsf recovered.


C:\Lotus\Domino>
```

d. All content of the database are now rolled forward to the last committed transaction found in the last archived transaction log.

vii. Restart Lotus Domino Server

11 Backup/Restore Microsoft Exchange Server 2000 / 2003

This chapter will describe in details how to use DataboksOBM to backup your Microsoft Exchange Server 2000 / 2003 and how you can restore your Microsoft Exchange Server 2000 / 2003 from the backup files.

11.1 Requirements

i. Microsoft Exchange Server 2000 with Services Pack 3 and post-SP3 update rollup installed. Please refer to http://www.microsoft.com/exchange/ for more information.
or
Microsoft Exchange Server 2003.

ii. DataboksOBM must be installed onto the computer running Microsoft Exchange Server 2000 / 2003.

iii. Data from Microsoft Exchange Server will be backed up to a temporary directory before they are sent to Databoks Offsite Backup Server. Please make sure you have sufficient space on your computer to store these data when you run the backup job.

11.2 Overview

A Microsoft Exchange Server 2000/2003 stores its data in Windows Active Directory as well as in its databases. To fully backup a Microsoft Exchange Server 2000/2003, you need to backup the following components:

i. **Windows System State**

The Windows System State contains the information about your Windows system, including Windows Active Directory. A Microsoft Exchange Server 2000 / 2003 stores some of its configuration, e.g. email accounts and mailbox properties, inside Windows Active Directory. It is important that Windows Active Directory is backup properly when backing up a Microsoft Exchange Server.

Active Directory is stored inside a Windows Server running as Windows domain controller. If your Exchange Server is a domain controller, you can simply backup the Windows System State of your Exchange Server. If your Exchange Server is running as a member server, you will need to install another copy of DataboksOBM onto the domain controller to backup the Windows System State of inside the domain controller.

For more information on Active Directory, please refer to
http://www.microsoft.com/windows2000/technologies/directory/ad/default.asp

ii. **Microsoft Information Store**
Exchange Server stores all emails and documents inside its databases, which are

grouped together as storage groups inside Microsoft Information Store. It is important that Microsoft Information Store is fully backup when backing your Exchange Server.

iii. **Microsoft Site Replication Service**
Microsoft Site Replication Service is installed automatically when exchange server site replication feature is enabled. Microsoft Site Replication stores its runtime and configuration information inside its own database. If you are running your Exchange Server with Site Replication Service enabled, please make sure that you backup the site replication database as well.

iv. **Microsoft Key Management Service (Exchange 2000 only)**
Similarly, if you have setup your Exchange Server with Key Management Services enabled, please make sure that you backup the key management database as well.

DataboksOBM will backup your Microsoft Exchange Server by taking the following steps:

i. Run all Pre-Commands of this backup set

ii. If the backup type to run is [Database Backup type],

a. Windows System State will be backed up to a temporary directory specified in its backup set

b. All exchange database(s) selected are backed up to a temporary directory specified in its backup set

iii. If the backup type to run is [Transaction Log Backup type],

a. New transaction log extents generated since last backup will be copied to the temporary directory

iv. Remove transaction log extents backed up from the Exchange Server

v. Run all Post-Commands of this backup set

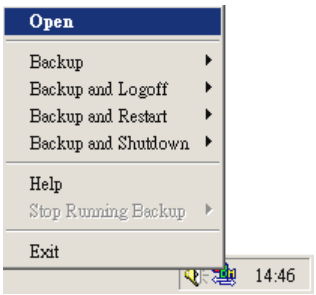
vi. Upload all backup files from the temporary directory to an Databoks Offsite Backup Server

11.3 How to backup Microsoft Exchange Server 2000 / 2003

Please follow the instructions below to backup your Microsoft Exchange Server 2000 / 2003 using DataboksOBM:

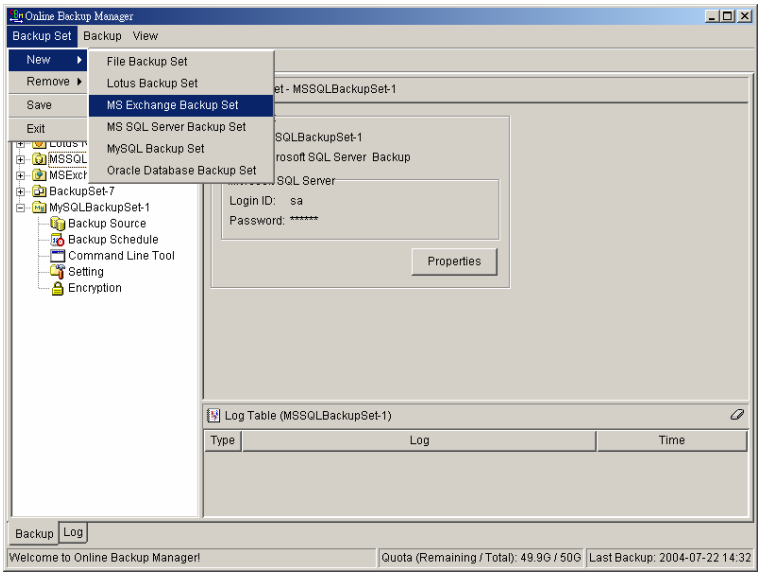
i. Open DataboksOBM

Right click DataboksOBM icon available in the system tray and choose [Open]

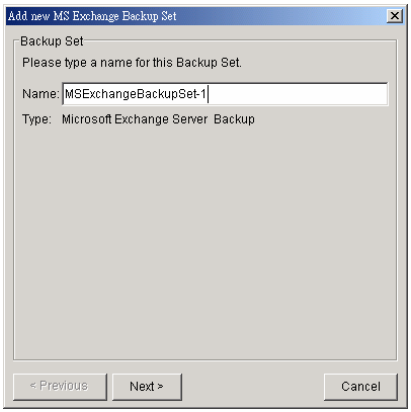


ii. From the Menu, Choose [Backup Set] -> [New] -> [MS Exchange Backup Set] Create a backup set

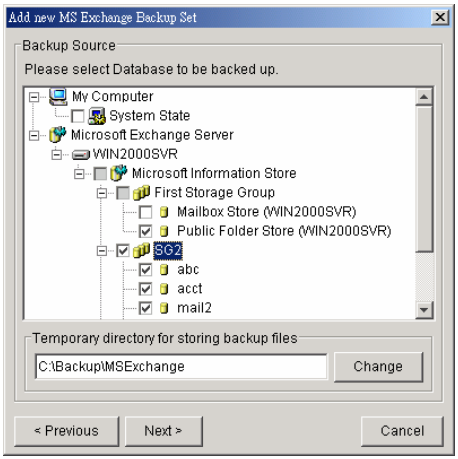
a. From the Menu, Choose [Backup Set] -> [New] -> [MS Exchange Backup Set]



b. Enter a name for your backup set


Add new MS Exchange Backup Set
Backup Set
Please type a name for this Backup Set.
Name: MSExchangeBackupSet-1
Type: Microsoft Exchange Server Backup
< Previous
Next >
Cancel

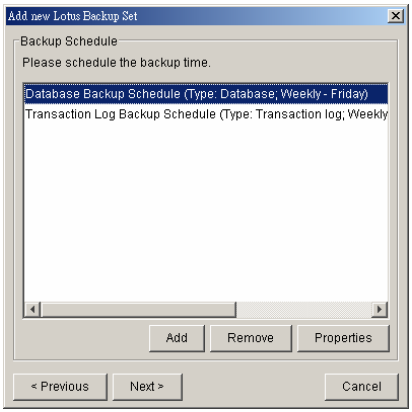
c. Select the database(s) to be backup



If this Exchange Server is also a domain controller of this Active Directory, select the [System State] checkbox as well. Otherwise, please install DataboksOBM to the domain controller of this Active Directory and select the [System State] checkbox on that computer

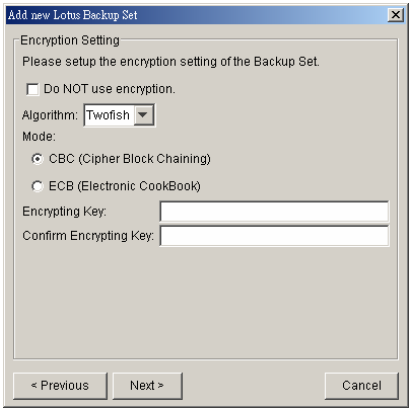
d. Enter a temporary directory for storing the backup files before they are sent to an Databoks Offsite Backup Server

e. Set the backup schedule for Database Backup



f. Set the backup schedule for Transaction Log Backup (for Domino server only) (Note: You can have more than one schedule in a backup set, i.e. you can perform intra-day transaction log backup by adding more than one daily transaction log backup schedule to your backup set)

g. Set the encryption algorithm, encryption mode and encrypting key for this backup set

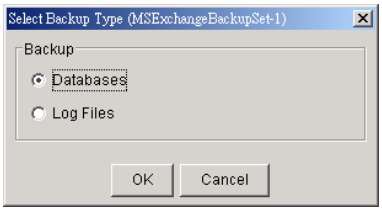


(Hint: For maximum security, please select AES (Advanced Encryption Standard) Algorithm, CBC (Cipher Block Chaining) mode and use an encrypting key with more than 8 characters.)

iii. Run Backup

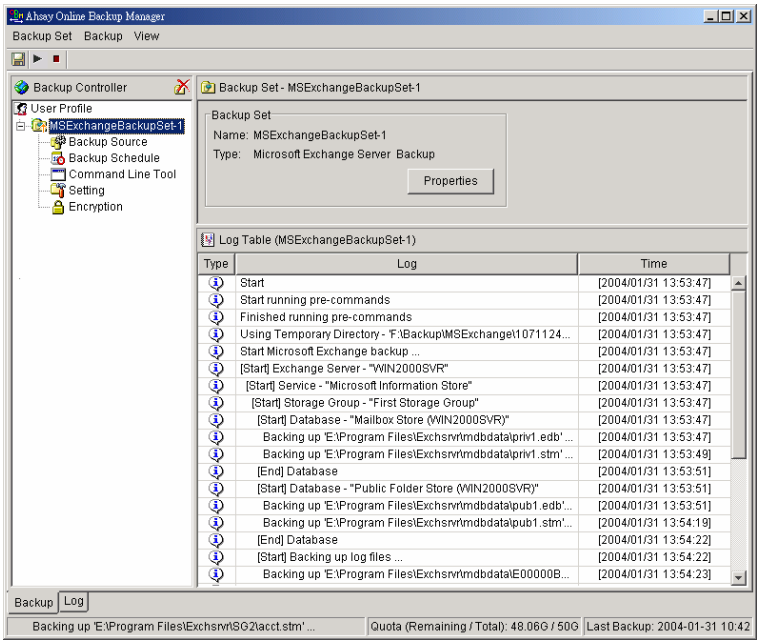
a. Select the backup set you want to run on the left panel and press the [Start Backup] button (►)

b. Select the backup type (e.g. Database, Log Files) you would like to perform



c. Select [Off-site Backup Server] to start backing up your files to an Databoks Offsite Backup Server and press the [OK] button

d. You should get something similar to the screen shot below.


Ahsay Online Backup Manager
Backup Set Backup View
Backup Controller
User Profile
MSExchangeBackupSet-1
Backup Source
Backup Schedule
Command Line Tool
Setting
Encryption
Backup Set - MSExchangeBackupSet-1
Backup Set
Name: MSExchangeBackupSet-1
Type: Microsoft Exchange Server Backup
Properties
Log Table (MSExchangeBackupSet-1)
Type
Log
Time
Start [2004/01/31 13:53:47]
Start running pre-commands [2004/01/31 13:53:47]
Finished running pre-commands [2004/01/31 13:53:47]
Using Temporary Directory - F:\Backup\MSExchange\1071124... [2004/01/31 13:53:47]
Start Microsoft Exchange backup ... [2004/01/31 13:53:47]
[Start] Exchange Server - "WIN2000SVR" [2004/01/31 13:53:47]
[Start] Service - "Microsoft Information Store" [2004/01/31 13:53:47]
[Start] Storage Group - "First Storage Group" [2004/01/31 13:53:47]
[Start] Database - "Mailbox Store (WIN2000SVR)" [2004/01/31 13:53:47]
Backing up 'E:\Program Files\Exchsrvr\mdbdata\priv1.edb' ... [2004/01/31 13:53:47]
Backing up 'E:\Program Files\Exchsrvr\mdbdata\priv1.stm' ... [2004/01/31 13:53:49]
[End] Database [2004/01/31 13:53:51]
[Start] Database - "Public Folder Store (WIN2000SVR)" [2004/01/31 13:53:51]
Backing up 'E:\Program Files\Exchsrvr\mdbdata\pub1.edb'... [2004/01/31 13:53:51]
Backing up 'E:\Program Files\Exchsrvr\mdbdata\pub1.stm'... [2004/01/31 13:54:19]
[End] Database [2004/01/31 13:54:22]
[Start] Backing up log files ... [2004/01/31 13:54:22]
Backing up 'E:\Program Files\Exchsrvr\mdbdata\E00000B... [2004/01/31 13:54:23]
Backup
Log
Backing up 'E:\Program Files\Exchsrvr\SG2\acct.stm' ...
Quota (Remaining / Total): 48.06G / 50G
Last Backup: 2004-01-31 10:42

11.4 How to restore Microsoft Exchange Server 2000 / 2003

Please follow the instructions below to restore Microsoft Exchange Server 2000 / 2003 from an Databoks Offsite Backup Server.

i. Prepare the system for your Exchange Server (if required)

Install the original version of Windows and Exchange Server (with the same level of service pack installed as in the original system) back to your computer

ii. Restore Windows Active Directory (if required)

If you have re-installed Windows, please download the Windows System State backup file, named [SystemState.bkf], from Databoks Offsite Backup Server and then use [NTBackup.exe] to restore your Windows System State to its backup time from the backup file by following the instructions below:

a. Run [NTBackup.exe] from [Start] -> [Run]

b. Press the [Restore Wizard] button and then press the [Next] button

c. Press the [Import] button and use the [Browse] button to select the backup file [SystemState.bkf] downloaded

d. Select the checkbox next to the description that matches your backup file

e. Press the [Next] button and then the [Finish] button

iii. Install DataboksOBM (if required)

Please refer to the [Installation] section for information on how to install DataboksOBM onto your computer.

iv. Startup the [Microsoft Information Store] services from Windows Services

v. Restore exchange database(s) from backup:

a. Download the database backup files to be restored from the Databoks Offsite Backup Server (or find the cached copy available in the temporary directory defined in your backup set) and save them to your hard disk (please make sure the directory structure is the same as it appears on the browser)

b. If the database to be restored exists on your computer already, please dismount it from the services using [Start] -> [Program] -> [Microsoft Exchange] -> [System Manager]

c. Use [ExchangeRestore.exe] from the [bin] directory under the installation directory of DataboksOBM (e.g. C:\Program Files\DataboksOBM\bin\ExchangeRestore.exe) to restore the exchange database(s).

Simply run [ExchangeRestore.exe] to print the usage

ExchangeRestore.exe Usage:

```
C:\Program Files\DataboksOBM\bin> ExchangeRestore.exe

Microsoft Exchange Server 2000/2003 Backup Recovery Utility

Usage:
ExchangeRestore DIR=path SERVER=server TEMP=tempDir [SERVICE=service [STORAGE=st
orage [DATABASE=database]]]

  DIR       Directory containing all backup files
  SERVER    Name of Exchange Server to be restored
  TEMP      Temporary directory to be used during restore
            Please specific a path with plenty of free space
  SERVICE   Name of Exchange Service to be restored. It must be either
            "Microsoft Information Store", "Microsoft Key Management Service"
            or "Microsoft Site Replication Service"
  STORAGE   Name of storage group to be restored
  DATABASE  Name of database to be restored

Examples:
1. To restore an exchange server:
   ExchangeRestore DIR="C:\Backup" SERVER="ExchangeServer" TEMP="C:\Temp"

2. To restore the information store:
   ExchangeRestore DIR="C:\Backup" SERVER="ExchangeServer" TEMP="C:\Temp"
      SERVICE="Microsoft Information Store"

3. To restore an exchange storage group:
   ExchangeRestore DIR="C:\Backup" SERVER="ExchangeServer" TEMP="C:\Temp"
      SERVICE="Microsoft Information Store" STORAGE="StorageGroup1"

4. To restore an exchange database:
   ExchangeRestore DIR="C:\Backup" SERVER="ExchangeServer" TEMP="C:\Temp"
      SERVICE="Microsoft Information Store" STORAGE="StorageGroup1"
      DATABASE="Database1"
where
  "C:\Backup"       is the directory containing all backup files
  "ExchangeServer"   is the server name of an exchange server
  "C:\Temp"         is the temporary directory to be used
  "StorageGroup1"   is the name of a storage group
  "Database1"       is the name of a database
```

d. (Example 1) To restore all databases from backup available in [F:\Backup] to an exchange server named [WIN2000SVR] using the temporary directory [F:\Temp], you can use this command:

E:\Program Files\DataboksOBM\bin> ExchangeRestore DIR="F:\Backup" TEMP="F:\Temp" SERVER="WIN2000SVR"

Exchange Server Recovery Example:

```
E:\Program Files\DataboksOBM\bin> ExchangeRestore DIR="F:\Backup" TEMP="F:\Temp"
SERVER="WIN2000SVR"

Microsoft Exchange Server 2000/2003 Backup Recovery Utility

 [Start] Exchange Server - 'WIN2000SVR'
  [Start] Service - 'Microsoft Information Store'
   [Start] Storage Group - 'First Storage Group'
    [Start] Database - 'Mailbox Store (WIN2000SVR)'
     Restoring file 'E:\Program Files\Exchsrvr\mdbdata\priv1.edb' ...
     Restoring file 'E:\Program Files\Exchsrvr\mdbdata\priv1.stm' ...
    [End] Database - 'Mailbox Store (WIN2000SVR)'
    [Start] Database - 'Public Folder Store (WIN2000SVR)'
     Restoring file 'E:\Program Files\Exchsrvr\mdbdata\pub1.edb' ...
     Restoring file 'E:\Program Files\Exchsrvr\mdbdata\pub1.stm' ...
    [End] Database - 'Public Folder Store (WIN2000SVR)'
    [Start] Restoring transaction log - 'First Storage Group'
     Restoring Log File 'F:\Temp\restore.tmp\First Storage Group\E00000B3.log' ...
     Restoring Log File 'F:\Temp\restore.tmp\First Storage Group\E00000B4.log' ...
    [End] Restoring transaction log - 'First Storage Group'
    [Start] Applying transaction log ...
    [End] Applying transaction log
   [End] Storage Group - 'First Storage Group'
.....
   [Start] Storage Group - 'SG2'
    [Start] Database - 'acct'
```

```
    Restoring file 'E:\Program Files\Exchsrvr\SG2\acct.edb' ...
    Restoring file 'E:\Program Files\Exchsrvr\SG2\acct.stm' ...
   [End] Database - 'acct'
   [Start] Restoring transaction log - 'SG2'
    Restoring Log File 'F:\Temp\restore.tmp\SG2\E0100072.log' ...
    Restoring Log File 'F:\Temp\restore.tmp\SG2\E0100073.log' ...
   [End] Restoring transaction log - 'SG2'
   [Start] Applying transaction log ...
   [End] Applying transaction log
  [End] Storage Group - 'SG2'
[End] Exchange Server - 'WIN2000SVR'

E:\Program Files\DataboksOBM\bin>
```

e. (Example 2) To restore the database named [mail] in storage group [SG5] from backup available in [F:\Backup] to an exchange server named [WIN2000SVR] using the temporary directory [F:\Temp], you can use this command:

E:\Program Files\DataboksOBM\bin> ExchangeRestore DIR="F:\Backup" TEMP="F:\Temp" SERVER="WIN2000SVR" SERVICE="Microsoft Information Store" STORAGE="SG5" DATABASE="mail1"

Exchange Server Recovery Example:

```
E:\Program Files\DataboksOBM\bin> ExchangeRestore DIR="F:\Backup" TEMP="F:\Temp"
SERVER="WIN2000SVR" SERVICE="Microsoft Information Store" STORAGE="SG5"
DATABASE="mail"

Microsoft Exchange Server 2000/2003 Backup Recovery Utility

  [Start] Storage Group - 'SG5'
   [Start] Database - 'mail'
    Restoring file 'E:\Program Files\Exchsrvr\SG5\mail.edb' ...
    Restoring file 'E:\Program Files\Exchsrvr\SG5\mail.stm' ...
   [End] Database - 'mail'
   [Start] Restoring transaction log - 'SG5'
    Restoring Log File 'F:\Temp\restore.tmp\SG5\E0300012.log' ...
    Restoring Log File 'F:\Temp\restore.tmp\SG5\E0300013.log' ...
   [End] Restoring transaction log - 'SG5'
   [Start] Applying transaction log ...
   [End] Applying transaction log
  [End] Storage Group - 'SG5'

E:\Program Files\DataboksOBM\bin>
```

f. Repeat the same procedure for each database to be restored to the Exchange Server.

g. You can use [Start] -> [Program] -> [Administrative Tools] -> [Event Viewer] to check if there are any errors generated from the exchange databases restoring activities.

vi. Completed

12 Backup/Restore MySQL Server

This chapter will describe in details how to use DataboksOBM to backup your MySQL server and how you can restore your MySQL server from the database backup files.

12.1 Requirements

i. DataboksOBM must be installed onto the computer running MySQL server.

ii. Data from MySQL server will be backed up to a temporary directory before they are sent to Databoks Offsite Backup Server. Please make sure you have sufficient space on your computer to store these data when you run the backup job.

iii. There must be a MySQL account can be used to connect from localhost.

Add two new MySQL accounts for Databoks Backup Manager

```
mysql> GRANT ALL PRIVILEGES ON *.* TO 'root'@'localhost'
    -> IDENTIFIED BY 'some_pass';
mysql> GRANT ALL PRIVILEGES ON *.* TO 'root'@'localhost.localdomain'
    -> IDENTIFIED BY 'some_pass';
mysql> FLUSH PRIVILEGES;
```

They are superuser accounts with full privileges to do anything with a password of some_pass.

12.2 Overview

DataboksOBM will backup your MySQL server by taking the following steps:

i. Run all Pre-Commands of this backup set

ii. All database(s) selected are backed up to a temporary directory specified in its backup set

iii. Run all Post-Commands of this backup set

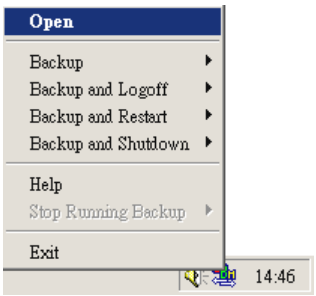
iv. Upload all backup files from the temporary directory to an Databoks Offsite Backup Server

12.3 How to backup MySQL server

Please follow the instructions below to backup your MySQL server using DataboksOBM:

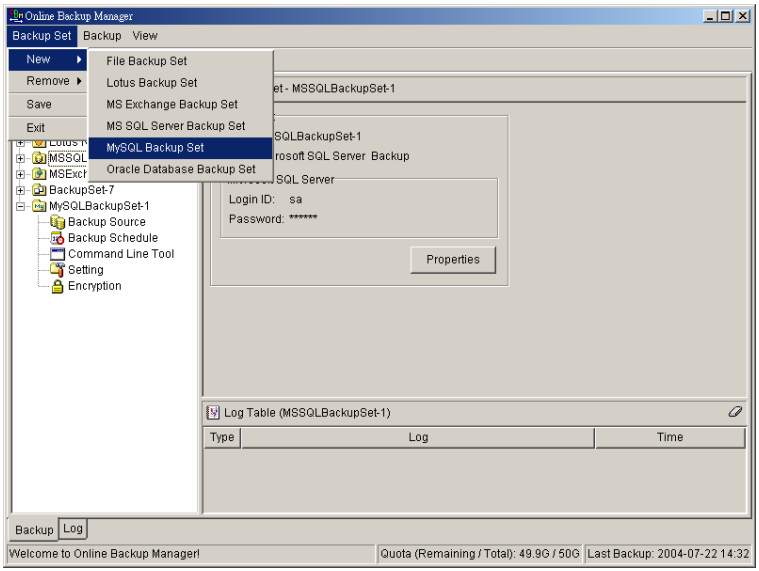
i. Open DataboksOBM

Right click DataboksOBM icon available in the system tray and choose [Open]

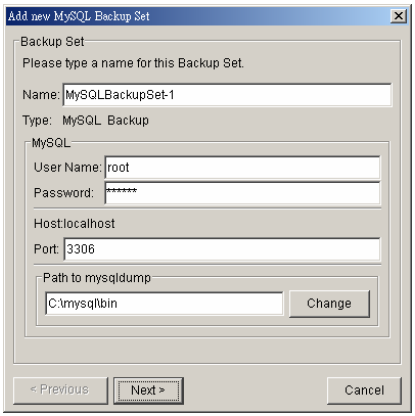


ii. From the Menu, Choose [Backup Set] -> [New] -> [MySQL Backup Set] Create a backup set

a. From the Menu, Choose [Backup Set] -> [New] -> [MySQL Backup Set]

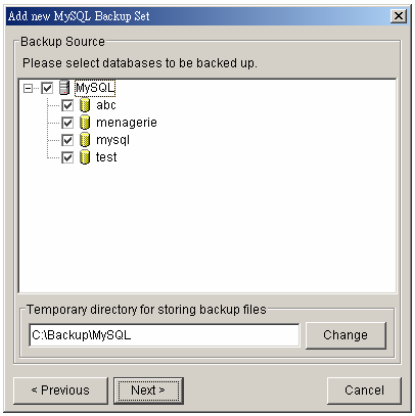


b. Enter a name for your backup set



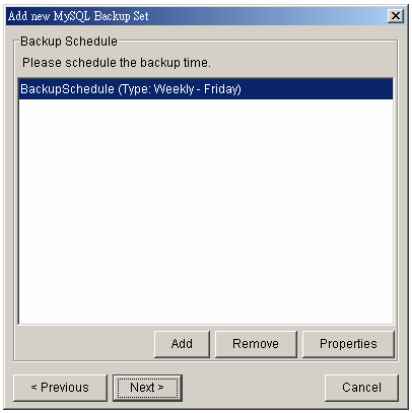
c. Enter the root password, the MySQL server TCP/IP port number and the path to MySQL backup utility (mysqldump)

d. Select the database(s) to be backup

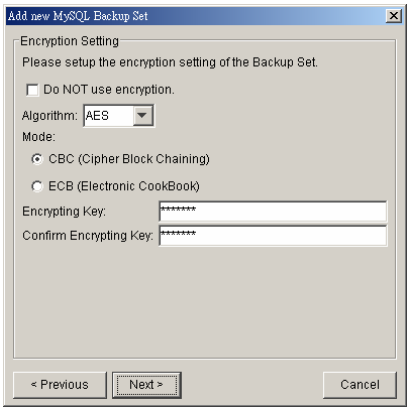


e. Enter a temporary directory for storing the backup files before they are sent to an Databoks Offsite Backup Server, e.g. C:\Backup\MySQL

f. Set the backup schedule for Database Backup



g. Set the encryption algorithm, encryption mode and encrypting key for this backup set

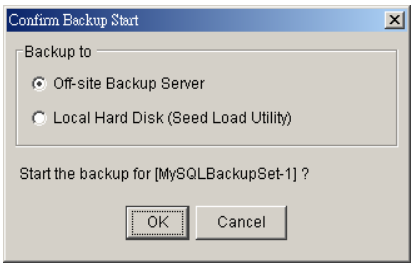


(Hint: For maximum security, please select AES (Advanced Encryption Standard) Algorithm, CBC (Cipher Block Chaining) mode and use an encrypting key with more than 8 characters.)

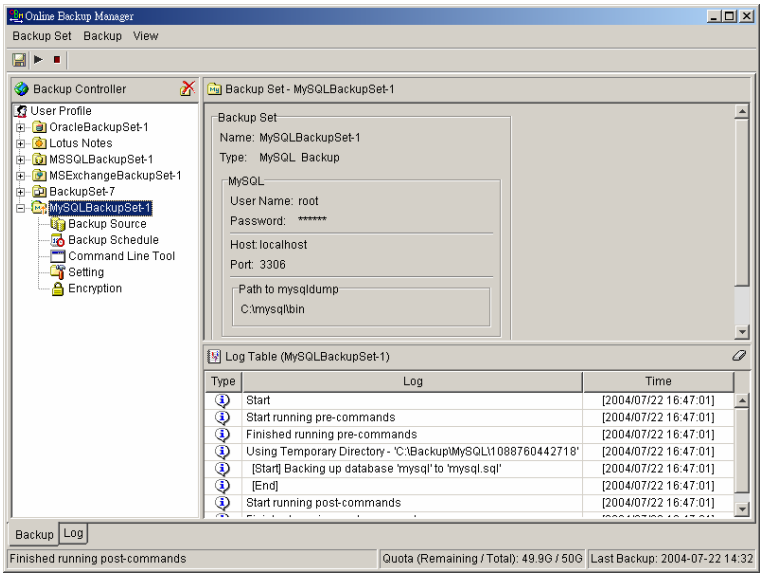
iii. Run Backup

a. Select the backup set you want to run on the left panel and press the [Start Backup] button (►)

b. Select [Off-site Backup Server] to start backing up your files to an Databoks Offsite Backup Server and press the [OK] button



c. You should get something similar to the screen shot below.



12.4 How to restore MySQL server

Please follow the instructions below to restore MySQL server from an Databoks Offsite Backup Server.

i. Download the database backup files to be restored from the Databoks Offsite Backup Server

   Please refer to the [5.3 How to restore file] section for information on how to download backup files from Databoks Offsite Backup Server.

ii. Restore the database named [db_name] from the database backup file [db_name.sql]:

   a. Connect to the MySQL server

      shell> mysql

   b. Create the database to be restored

      mysql> CREATE DATABASE IF NOT EXISTS db_name

   c.Restore the database backup file back into the MySQL server

      shell> mysql db_name < db_name.sql

iii. Repeat the same procedure for each database to be restored to the MySQL Server.

iv. Completed

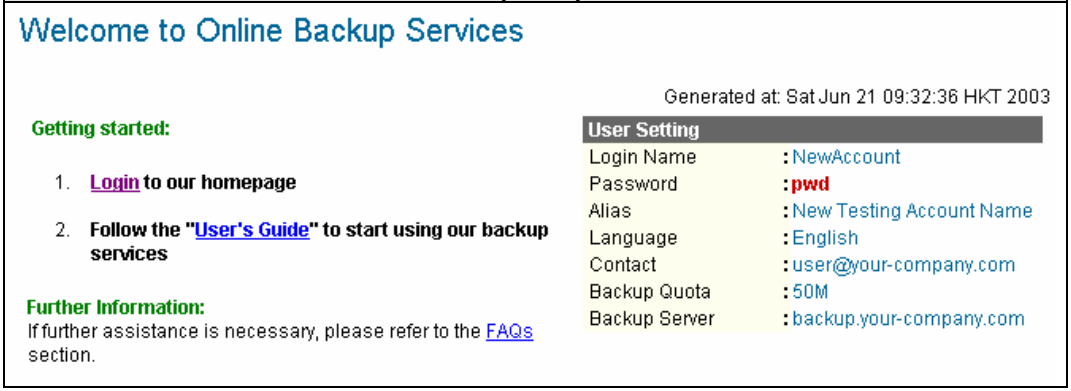
13 Email Reporting

Databoks Offsite Backup Server makes use of the email system to keep you informed with the status of your backup activities. Please make sure your contact information within the backup system is correct to receive the reports described in this chapter.

13.1 New User Report

When a new backup account is added to the backup server, a new user report will be delivered to the contact email(s) of the new account. The New User Report contains the following information:

Sample Report

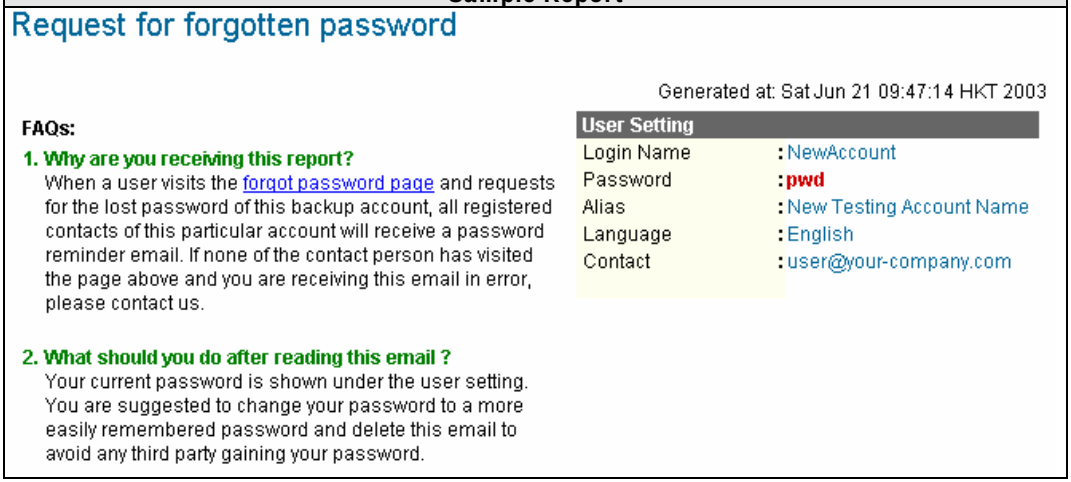

Welcome to Online Backup Services
Generated at: Sat Jun 21 09:32:36 HKT 2003
Getting started:
1. Login to our homepage
2. Follow the "User's Guide" to start using our backup services
Further Information:
If further assistance is necessary, please refer to the FAQs section.
User Setting
Login Name : NewAccount
Password : pwd
Alias : New Testing Account Name
Language : English
Contact : user@your-company.com
Backup Quota : 50M
Backup Server : backup.your-company.com

Key	Description
Login Name	Login name
Password	Password
Alias	Alias
Language	Preferred Language for your backup report
Contact	Email Address that will be used to contact you
Backup Quota	Backup quota
Backup Server	Backup server

13.2 Forgot Password Report

If you have forgotten your password, you can use the [Forgot Password] feature available on the web interface to have your password delivered to you through email. (Please refer to "Retrieve Forgotten Password" section in the next chapter for more information on how to retrieve your forgot password report.) The Forgot Password Report contains the following information:

Sample Report

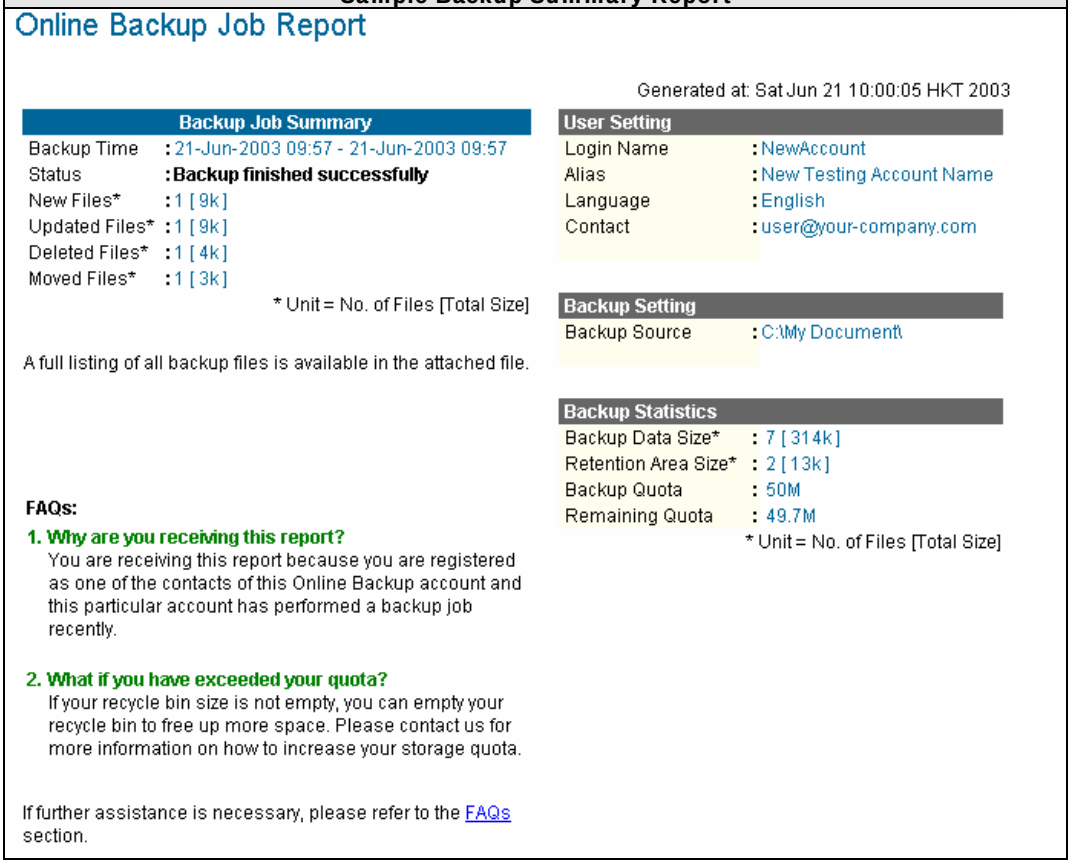

Request for forgotten password
Generated at: Sat Jun 21 09:47:14 HKT 2003
FAQs:
1. Why are you receiving this report?
When a user visits the forgot password page and requests for the lost password of this backup account, all registered contacts of this particular account will receive a password reminder email. If none of the contact person has visited the page above and you are receiving this email in error, please contact us.
2. What should you do after reading this email ?
Your current password is shown under the user setting. You are suggested to change your password to a more easily remembered password and delete this email to avoid any third party gaining your password.
User Setting
Login Name : NewAccount
Password : pwd
Alias : New Testing Account Name
Language : English
Contact : user@your-company.com

Key	Description
Login Name	Login name
Password	Password
Alias	Alias
Language	Preferred Language for your backup report
Contact	Email Address that will be used to contact you

13.3 Backup Job Report

For each backup job you have run, a backup job report will be sent to you by email. This report contains a summary for the backup job that was run and a full listing of all files being backed up by the backup job. The backup summary report contains the following information:

Sample Backup Summary Report



Online Backup Job Report

Generated at: Sat Jun 21 10:00:05 HKT 2003

Backup Job Summary

Backup Time	: 21-Jun-2003 09:57 - 21-Jun-2003 09:57
Status	: **Backup finished successfully**
New Files*	: 1 [9k]
Updated Files*	: 1 [9k]
Deleted Files*	: 1 [4k]
Moved Files*	: 1 [3k]

* Unit = No. of Files [Total Size]

A full listing of all backup files is available in the attached file.

User Setting

Login Name	: NewAccount
Alias	: New Testing Account Name
Language	: English
Contact	: user@your-company.com

Backup Setting

Backup Source	: C:\My Document\

Backup Statistics

Backup Data Size*	: 7 [314k]
Retention Area Size*	: 2 [13k]
Backup Quota	: 50M
Remaining Quota	: 49.7M

* Unit = No. of Files [Total Size]

FAQs:

1. Why are you receiving this report?
You are receiving this report because you are registered as one of the contacts of this Online Backup account and this particular account has performed a backup job recently.

2. What if you have exceeded your quota?
If your recycle bin size is not empty, you can empty your recycle bin to free up more space. Please contact us for more information on how to increase your storage quota.

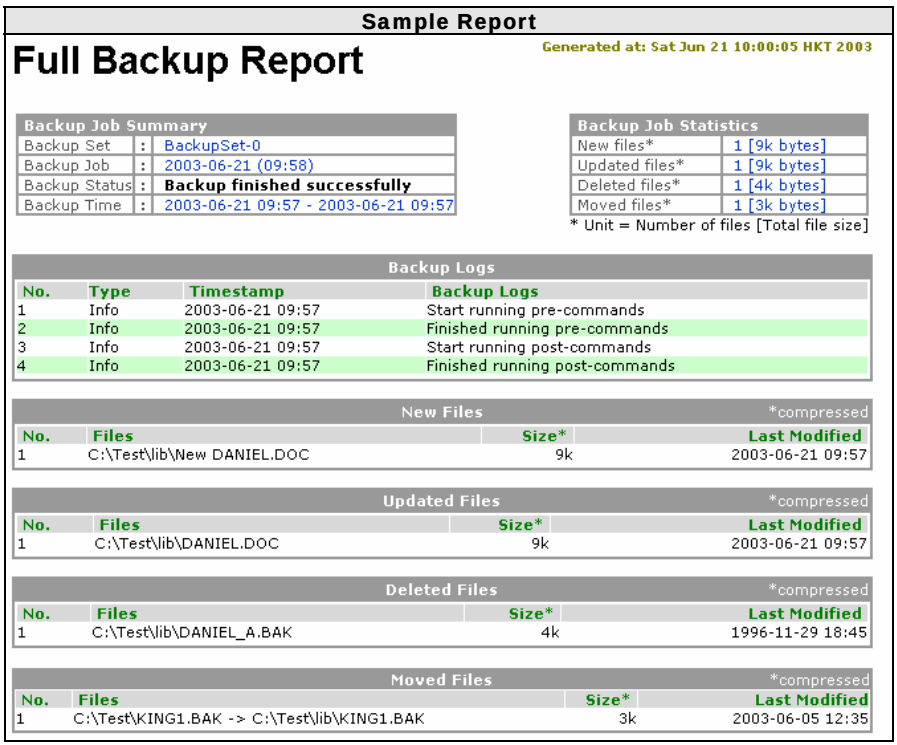
If further assistance is necessary, please refer to the FAQs section.

Key	Description
Backup Time	The time when the backup job ran
Backup Status	The overall status of the backup job. Normally, you should see "Backup finished successfully" in this field. If you happen to get something else, please consult the attached full report for more information.
New Files	Total number and size of backup files added to your backup set
Updated Files	Total number and size of backup files updated in your backup set
Deleted Files	Total number and size of backup files deleted from your backup set
Moved Files	Total number and size of backup files relocated in your backup set
Login Name	Login name
Alias	Alias

Language	Preferred Language for your backup report
Contact	Email Address that will be used to contact you
Backup Source	All files/directories that will be backed up
Backup Data Size	The total backup data stored in the data area
Retention Area Size	The total backup data stored in the retention area. Old copies of updated or deleted backup files are retained in the retention area for the number of days as specified by the retention policy of the backup set before they are removed from the system.
Backup Quota	Backup Quota
Remaining Quota	Remaining Quota

The full backup report, which contains a full listing of all files backed up by the backup job, is attached to the backup job report email as a zip file. You need to unzip it before you can read the full report.

Sample Report



Full Backup Report

Generated at: Sat Jun 21 10:00:05 HKT 2003

Backup Job Summary

Backup Set	:	BackupSet-0
Backup Job	:	2003-06-21 (09:58)
Backup Status	:	**Backup finished successfully**
Backup Time	:	2003-06-21 09:57 - 2003-06-21 09:57

Backup Job Statistics

New files*	1 [9k bytes]
Updated files*	1 [9k bytes]
Deleted files*	1 [4k bytes]
Moved files*	1 [3k bytes]

* Unit = Number of files [Total file size]

Backup Logs

No.	Type	Timestamp	Backup Logs
1	Info	2003-06-21 09:57	Start running pre-commands
2	Info	2003-06-21 09:57	Finished running pre-commands
3	Info	2003-06-21 09:57	Start running post-commands
4	Info	2003-06-21 09:57	Finished running post-commands

New Files *compressed

No.	Files	Size*	Last Modified
1	C:\Test\lib\New DANIEL.DOC	9k	2003-06-21 09:57

Updated Files *compressed

No.	Files	Size*	Last Modified
1	C:\Test\lib\DANIEL.DOC	9k	2003-06-21 09:57

Deleted Files *compressed

No.	Files	Size*	Last Modified
1	C:\Test\lib\DANIEL_A.BAK	4k	1996-11-29 18:45

Moved Files *compressed

No.	Files	Size*	Last Modified
1	C:\Test\KING1.BAK -> C:\Test\lib\KING1.BAK	3k	2003-06-05 12:35

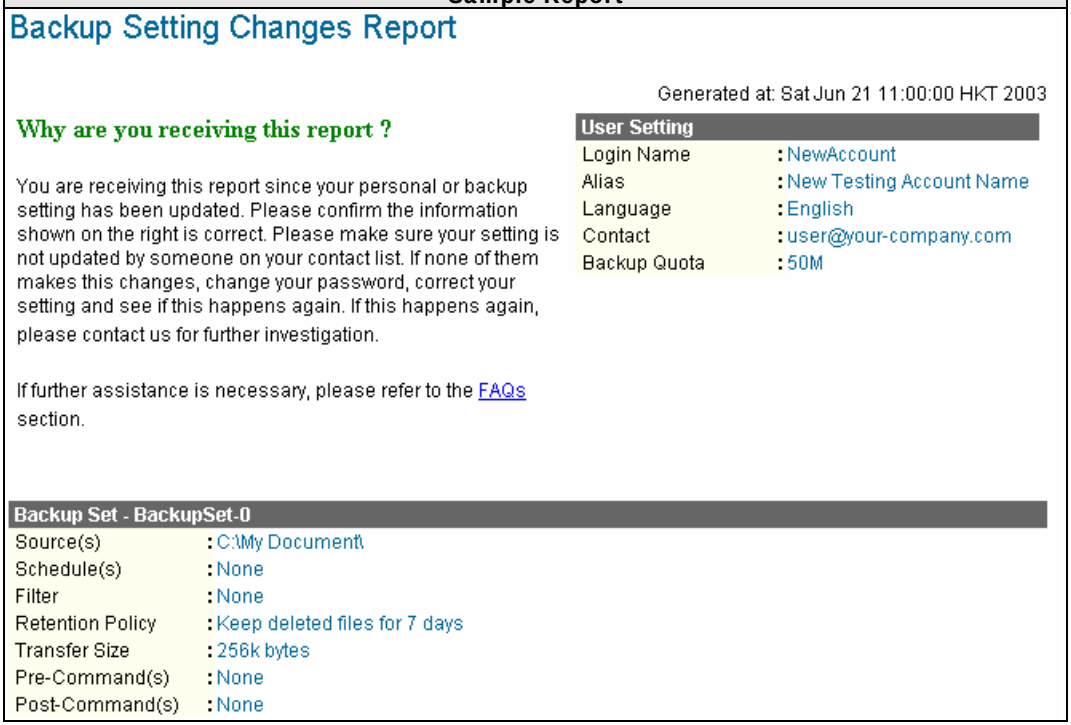
Key	Description
Backup Set	The name of the backup set
Backup Job	The name of the backup job (which is the start time of the backup job)
Backup Status	The overall status of the backup job. Normally, you should see "Backup finished successfully" in this field. If you happen to get something else, please consult the attached full report for more information.

Backup Time	The time when the backup job ran
Backup Log	All messages logged when running this backup job
New Files	Total number and size of backup files added to your backup set
Updated Files	Total number and size of backup files updated in your backup set
Deleted Files	Total number and size of backup files deleted from your backup set
Moved Files	Total number and size of backup files relocated in your backup set
New File List	Full list of all backup files added to your backup set
Updated File List	Full list of all backup files updated in your backup set
Deleted File List	Full list of all backup files deleted from your backup set
Moved File List	Full list of all backup files relocated in your backup set

13.4 Setting Change Report

After you have updated your user profile or backup setting, a setting change report will be sent to you. This report allows you to track record of the changes that have been made to your backup account.

Sample Report



Backup Setting Changes Report

Generated at: Sat Jun 21 11:00:00 HKT 2003

Why are you receiving this report ?

You are receiving this report since your personal or backup setting has been updated. Please confirm the information shown on the right is correct. Please make sure your setting is not updated by someone on your contact list. If none of them makes this changes, change your password, correct your setting and see if this happens again. If this happens again, please contact us for further investigation.

If further assistance is necessary, please refer to the FAQs section.

User Setting

Login Name	: NewAccount
Alias	: New Testing Account Name
Language	: English
Contact	: user@your-company.com
Backup Quota	: 50M

Backup Set - BackupSet-0

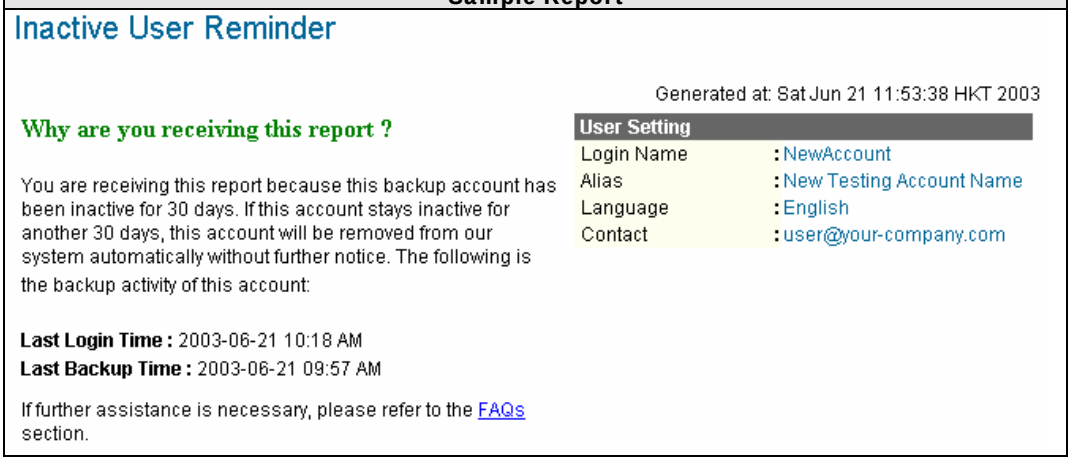
Source(s)	: C:\My Document\
Schedule(s)	: None
Filter	: None
Retention Policy	: Keep deleted files for 7 days
Transfer Size	: 256k bytes
Pre-Command(s)	: None
Post-Command(s)	: None

Key	Description
Login Name	Login name
Alias	Alias
Language	Preferred Language for your backup reports
Contact	Email Address that will be used to contact you
Backup Quota	Backup Quota
Backup Source(s)	All backup sources of the backup set
Backup Schedule(s)	All backup schedules of the backup set
Filter(s)	All backup filters of the backup set
Retention Policy	The retention policy of the backup set
Transfer Size	The transfer block size of the backup set
Pre-Command(s)	All Pre-Command(s) of the backup set
Post-Command(s)	All Post-Command(s) of the backup set

13.5 Inactive User Reminder

You will receive an inactive user reminder in email if your account has been left inactive for the period of 7 days (or the period specified by the system administrator). This is to remain you that you have not been running backup for more 7 days. If you are a free trial user, your account will be removed from the system automatically if the system can track no records of your backup activities in the next 30 days after receiving this report.

Sample Report



Inactive User Reminder

Generated at: Sat Jun 21 11:53:38 HKT 2003

Why are you receiving this report ?

You are receiving this report because this backup account has been inactive for 30 days. If this account stays inactive for another 30 days, this account will be removed from our system automatically without further notice. The following is the backup activity of this account:

Last Login Time : 2003-06-21 10:18 AM
Last Backup Time : 2003-06-21 09:57 AM

If further assistance is necessary, please refer to the FAQs section.

User Setting	
Login Name	: NewAccount
Alias	: New Testing Account Name
Language	: English
Contact	: user@your-company.com

Key	Description
Login Name	Login name
Alias	Alias
Language	Preferred Language for your backup reports
Contact	Email Address that will be used to contact you
Backup Quota	Backup Quota
Last Login Time	The last time you logon to the backup system
Last Backup Time	The last time you ran a backup job

14 Web Features

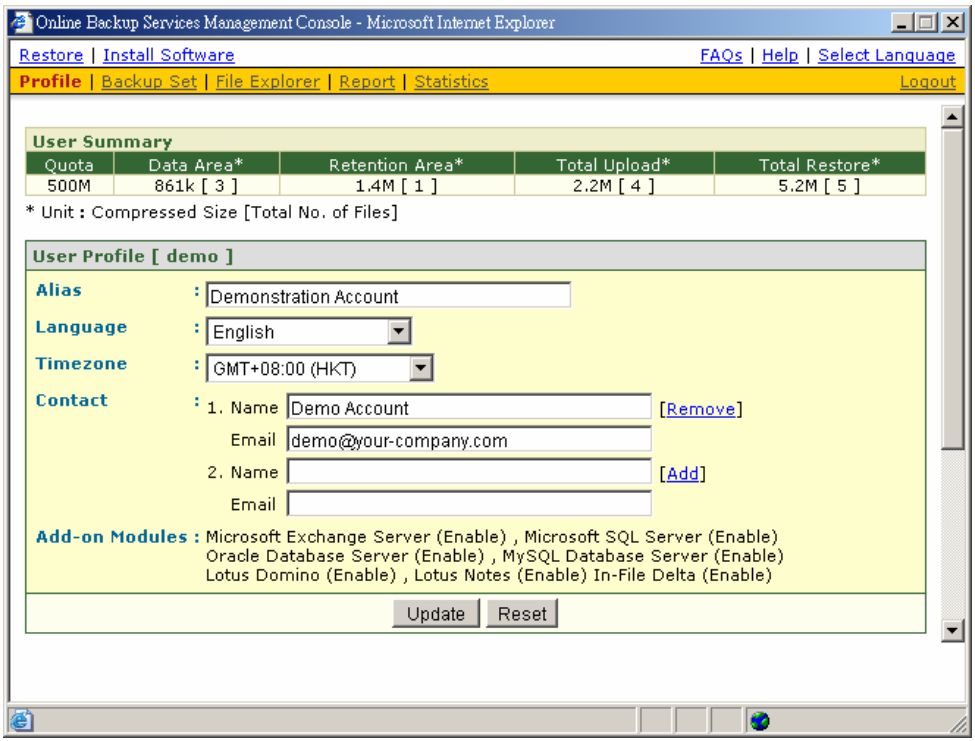
Other than the features of DataboksOBM described in the previous chapter, the web interface of Databoks Offsite Backup Server provides you access to some additional features that are not available in DataboksOBM. This chapter describes each of these features in details.

14.1 Install DataboksOBM

Before you can use DataboksOBM, you have to use the web interface of Databoks Offsite Backup Server to install DataboksOBM onto your computer. Please refer to the installation section (Chapter 2) for information on how to install DataboksOBM onto your computer.

14.2 Update User Profile

You can update your user profile by using the [Profile] panel available on the web interface. To change your profile, just make any changes to your profit on the panel shown below and press the [Update] button.

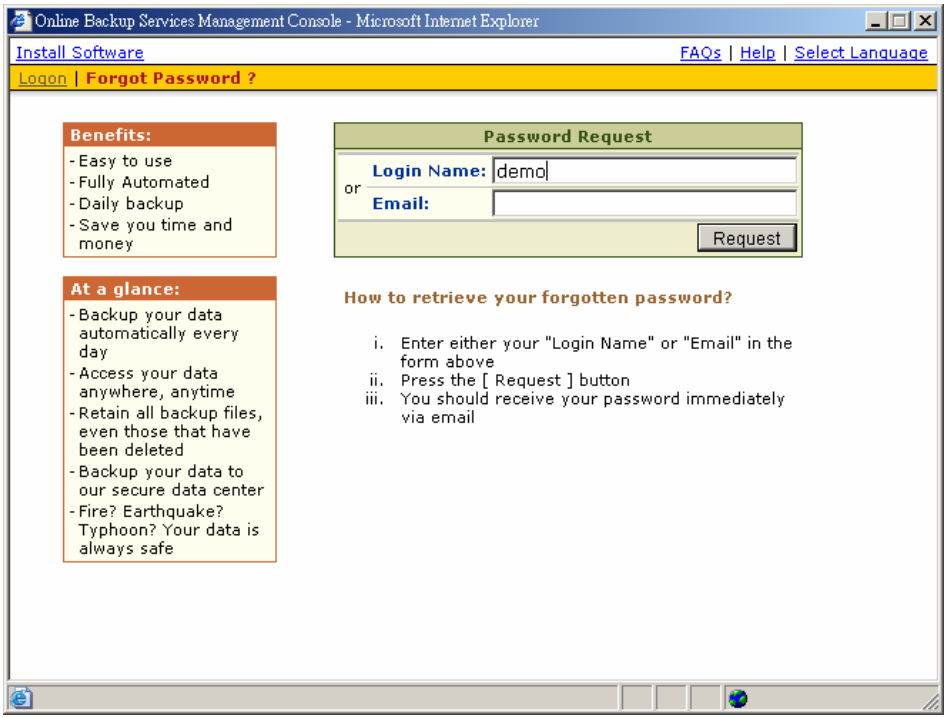

Online Backup Services Management Console - Microsoft Internet Explorer
Restore | Install Software
FAQs | Help | Select Language
Profile | Backup Set | File Explorer | Report | Statistics
Logout
User Summary
Quota
Data Area*
Retention Area*
Total Upload*
Total Restore*
500M
861k [3]
1.4M [1]
2.2M [4]
5.2M [5]
* Unit : Compressed Size [Total No. of Files]
User Profile [demo]
Alias : Demonstration Account
Language : English
Timezone : GMT+08:00 (HKT)
Contact : 1. Name Demo Account [Remove]
Email demo@your-company.com
2. Name [Add]
Email
Add-on Modules : Microsoft Exchange Server (Enable) , Microsoft SQL Server (Enable)
Oracle Database Server (Enable) , MySQL Database Server (Enable)
Lotus Domino (Enable) , Lotus Notes (Enable) In-File Delta (Enable)
Update
Reset

Key	Description
Quota	Backup Quota
Data Area	Total number and size backup files stored in the data area
Retention Area	Total number and size of backup files stored in the retention area
Total Upload	Total number and size of backup files uploaded to the backup server

Total Restore	Total number and size of backup files restored from the backup server
Login Name	Login name
Display Name	Alias of your backup account
Language	Preferred Language for your backup report
Time Zone	Your Time zone
Contact	Email Address that will be used to contact you

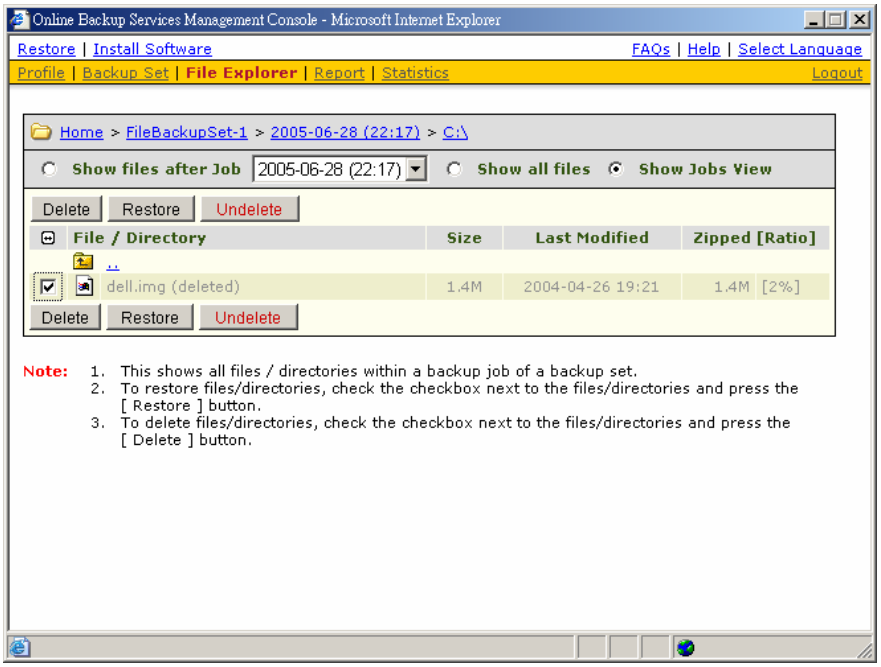
14.3 Request Forgotten Password

If you have forgotten your password, you can retrieve it by simply entering your login name or your registered email address on the [Password Request] form and press the [Request] button. Your password will be sent to your registered email address automatically.


Online Backup Services Management Console - Microsoft Internet Explorer
Install Software
FAQs | Help | Select Language
Logon | Forgot Password ?
Benefits:
- Easy to use
- Fully Automated
- Daily backup
- Save you time and money
At a glance:
- Backup your data automatically every day
- Access your data anywhere, anytime
- Retain all backup files, even those that have been deleted
- Backup your data to our secure data center
- Fire? Earthquake? Typhoon? Your data is always safe
Password Request
or
Login Name: demo
Email:
Request
How to retrieve your forgotten password?
i. Enter either your "Login Name" or "Email" in the form above
ii. Press the [Request] button
iii. You should receive your password immediately via email

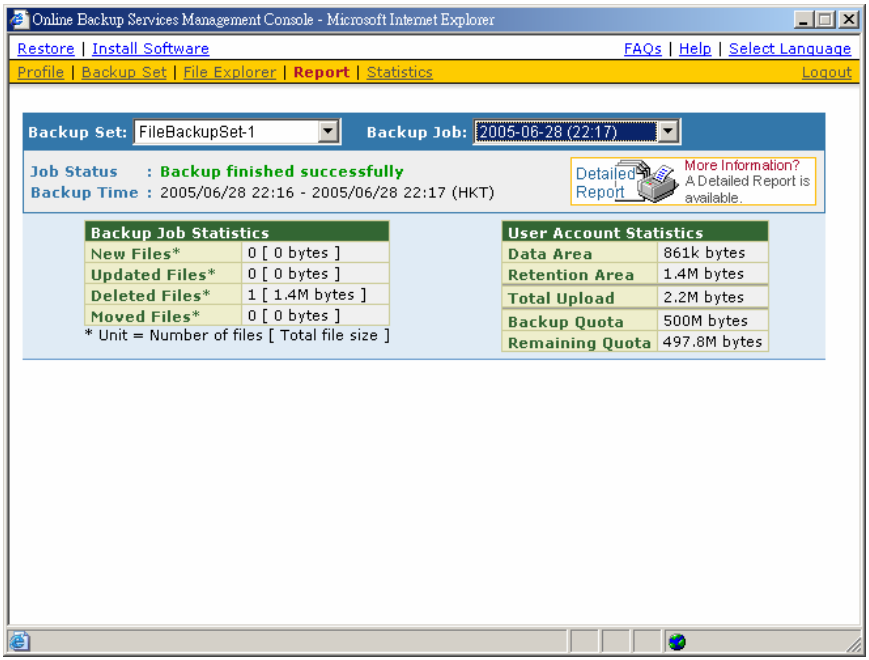
14.4 Delete/Undelete Backup Files

In addition to reviewing your backup activities from the email report and from DataboksOBM, you can also review any of your backup jobs by using the [Report] panel available on the web interface. To review a backup job, just select the required backup job from the [Backup Set] and [Backup Job] drop down list.


Online Backup Services Management Console - Microsoft Internet Explorer
Restore | Install Software
FAQs | Help | Select Language
Profile | Backup Set | File Explorer | Report | Statistics
Logout
Home > FileBackupSet-1 > 2005-06-28 (22:17) > C:\
Show files after Job
2005-06-28 (22:17)
Show all files
Show Jobs View
Delete
Restore
Undelete
File / Directory
Size
Last Modified
Zipped [Ratio]
..
dell.img (deleted)
1.4M
2004-04-26 19:21
1.4M [2%]
Delete
Restore
Undelete
Note:
1. This shows all files / directories within a backup job of a backup set.
2. To restore files/directories, check the checkbox next to the files/directories and press the [Restore] button.
3. To delete files/directories, check the checkbox next to the files/directories and press the [Delete] button.

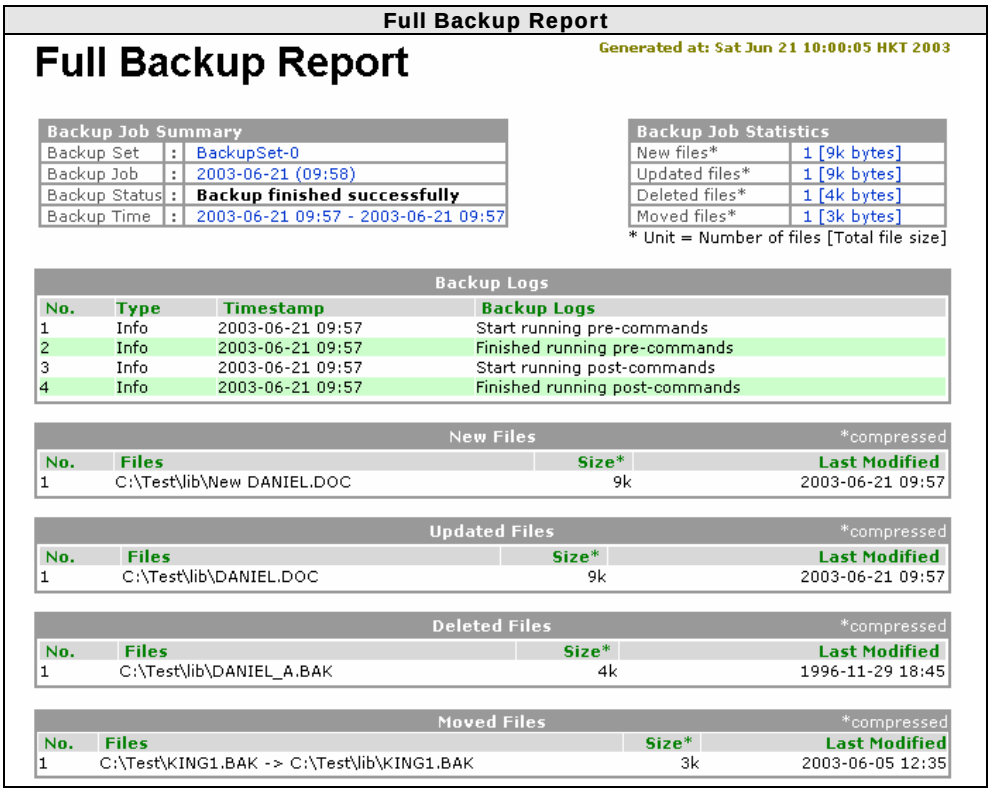
14.5 Review Backup Jobs

In addition to reviewing your backup activities from the email report and from DataboksOBM, you can also review any of your backup jobs by using the [Report] panel available on the web interface. To review a backup job, just select the required backup job from the [Backup Set] and [Backup Job] drop down list.


Online Backup Services Management Console - Microsoft Internet Explorer
Restore | Install Software
FAQs | Help | Select Language
Profile | Backup Set | File Explorer | Report | Statistics
Logout
Backup Set: FileBackupSet-1
Backup Job: 2005-06-28 (22:17)
Job Status : Backup finished successfully
Backup Time : 2005/06/28 22:16 - 2005/06/28 22:17 (HKT)
Detailed Report
More Information?
A Detailed Report is available.
Backup Job Statistics
New Files* 0 [0 bytes]
Updated Files* 0 [0 bytes]
Deleted Files* 1 [1.4M bytes]
Moved Files* 0 [0 bytes]
* Unit = Number of files [Total file size]
User Account Statistics
Data Area 861k bytes
Retention Area 1.4M bytes
Total Upload 2.2M bytes
Backup Quota 500M bytes
Remaining Quota 497.8M bytes

Key	Description
Job Status	The overall status of the backup job. Normally, you should see "Backup finished successfully" in this field. If you happen to get something else, please click the [Detailed Report] images on the page.
Backup Time	The time when the backup job ran
New Files	Total number and size of backup files added to your backup set
Updated Files	Total number and size of backup files updated in your backup set
Deleted Files	Total number and size of backup files deleted from your backup set
Moved Files	Total number and size of backup files relocated in your backup set
Backup Data Size	The total backup data stored in the data area
Retention Area Size	The total backup data stored in the retention area. Old copies of updated or deleted backup files are retained in the retention area for the number of days as specified by the retention policy of the backup set before they are removed from the system.
Total Upload	Total number and size of backup files uploaded to the backup server
Backup Quota	Backup Quota
Remaining Quota	Remaining Quota

You can open the [Full Backup Report] to review all information logged by a backup job by clicking the [Detailed Report] image on the [Report] panel.



Full Backup Report

Full Backup Report

Generated at: Sat Jun 21 10:00:05 HKT 2003

Backup Job Summary		
Backup Set	:	BackupSet-0
Backup Job	:	2003-06-21 (09:58)
Backup Status	:	**Backup finished successfully**
Backup Time	:	2003-06-21 09:57 - 2003-06-21 09:57

Backup Job Statistics	
New files*	1 [9k bytes]
Updated files*	1 [9k bytes]
Deleted files*	1 [4k bytes]
Moved files*	1 [3k bytes]

* Unit = Number of files [Total file size]

Backup Logs

No.	Type	Timestamp	Backup Logs
1	Info	2003-06-21 09:57	Start running pre-commands
2	Info	2003-06-21 09:57	Finished running pre-commands
3	Info	2003-06-21 09:57	Start running post-commands
4	Info	2003-06-21 09:57	Finished running post-commands

New Files *compressed

No.	Files	Size*	Last Modified
1	C:\Test\lib\New DANIEL.DOC	9k	2003-06-21 09:57

Updated Files *compressed

No.	Files	Size*	Last Modified
1	C:\Test\lib\DANIEL.DOC	9k	2003-06-21 09:57

Deleted Files *compressed

No.	Files	Size*	Last Modified
1	C:\Test\lib\DANIEL_A.BAK	4k	1996-11-29 18:45

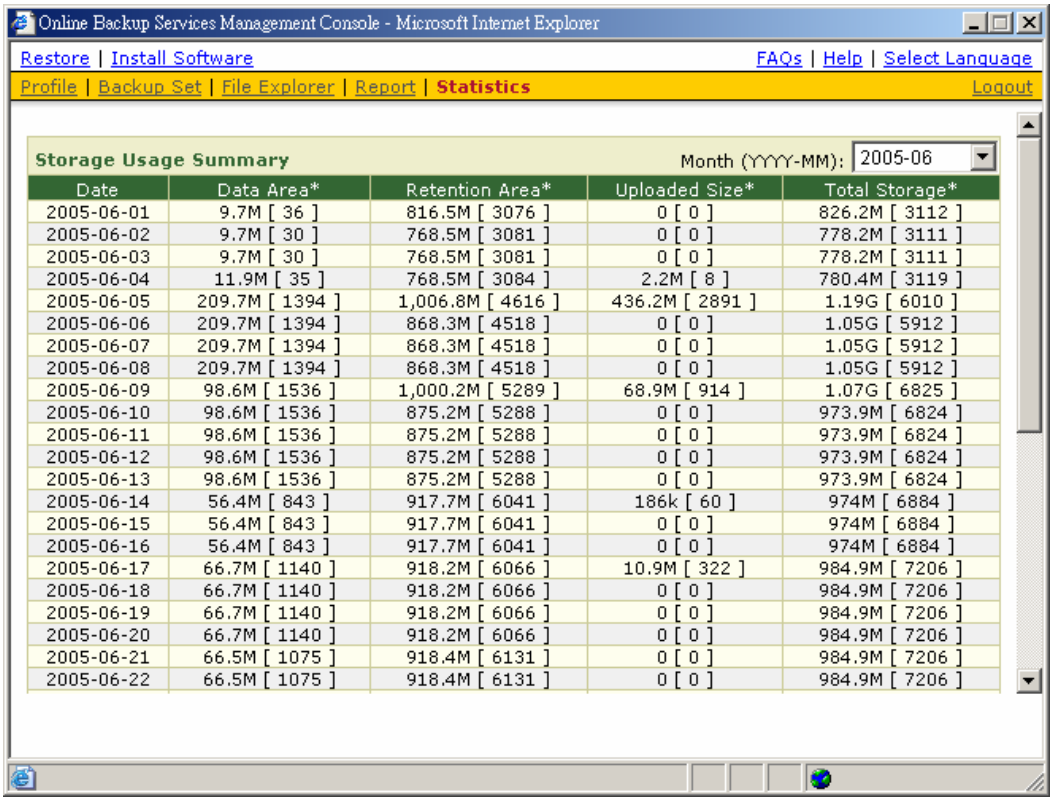
Moved Files *compressed

No.	Files	Size*	Last Modified
1	C:\Test\KING1.BAK -> C:\Test\lib\KING1.BAK	3k	2003-06-05 12:35

Parameter	Description
Backup Set	The name of the backup set
Backup Job	The name of the backup job (which is the start time of the backup job)
Backup Status	The overall status of the backup job.
Backup Time	The time when the backup job ran
Backup Log	All messages logged when running this backup job
New Files	Total number and size of backup files added to your backup set
Updated Files	Total number and size of backup files updated in your backup set
Deleted Files	Total number and size of backup files deleted from your backup set
Moved Files	Total number and size of backup files relocated in your backup set
New File List	Full list of all backup files added to your backup set
Updated File List	Full list of all backup files updated in your backup set
Deleted File List	Full list of all backup files deleted from your backup set
Moved File List	Full list of all backup files relocated in your backup set

14.6 Review Storage Statistics

You can review the amount of data you have stored on the backup server and uploaded to the backup server on each day by opening the [Statistics] panel available on the web interface. To review your storage statistics for a different month, just select the month you are after by selecting from the [Month] drop down list.


Online Backup Services Management Console - Microsoft Internet Explorer
Restore | Install Software
FAQs | Help | Select Language
Profile | Backup Set | File Explorer | Report | Statistics
Logout
Storage Usage Summary
Month (YYYY-MM): 2005-06

Date	Data Area*	Retention Area*	Uploaded Size*	Total Storage*
2005-06-01	9.7M [36]	816.5M [3076]	0 [0]	826.2M [3112]
2005-06-02	9.7M [30]	768.5M [3081]	0 [0]	778.2M [3111]
2005-06-03	9.7M [30]	768.5M [3081]	0 [0]	778.2M [3111]
2005-06-04	11.9M [35]	768.5M [3084]	2.2M [8]	780.4M [3119]
2005-06-05	209.7M [1394]	1,006.8M [4616]	436.2M [2891]	1.19G [6010]
2005-06-06	209.7M [1394]	868.3M [4518]	0 [0]	1.05G [5912]
2005-06-07	209.7M [1394]	868.3M [4518]	0 [0]	1.05G [5912]
2005-06-08	209.7M [1394]	868.3M [4518]	0 [0]	1.05G [5912]
2005-06-09	98.6M [1536]	1,000.2M [5289]	68.9M [914]	1.07G [6825]
2005-06-10	98.6M [1536]	875.2M [5288]	0 [0]	973.9M [6824]
2005-06-11	98.6M [1536]	875.2M [5288]	0 [0]	973.9M [6824]
2005-06-12	98.6M [1536]	875.2M [5288]	0 [0]	973.9M [6824]
2005-06-13	98.6M [1536]	875.2M [5288]	0 [0]	973.9M [6824]
2005-06-14	56.4M [843]	917.7M [6041]	186k [60]	974M [6884]
2005-06-15	56.4M [843]	917.7M [6041]	0 [0]	974M [6884]
2005-06-16	56.4M [843]	917.7M [6041]	0 [0]	974M [6884]
2005-06-17	66.7M [1140]	918.2M [6066]	10.9M [322]	984.9M [7206]
2005-06-18	66.7M [1140]	918.2M [6066]	0 [0]	984.9M [7206]
2005-06-19	66.7M [1140]	918.2M [6066]	0 [0]	984.9M [7206]
2005-06-20	66.7M [1140]	918.2M [6066]	0 [0]	984.9M [7206]
2005-06-21	66.5M [1075]	918.4M [6131]	0 [0]	984.9M [7206]
2005-06-22	66.5M [1075]	918.4M [6131]	0 [0]	984.9M [7206]

Key	Description
Date	The date the following statistics are collected
Data Area	Total number and size of backup files stored in the data area on a particular date
Retention Area	Total number and size of backup files stored in the retention area on a particular date
Uploaded Size	Total number and size of backup files uploaded to the backup server on a particular date
Total Storage	Total number and size of backup files stored under your backup account on a particular date

15 Further Information

15.1 FAQs

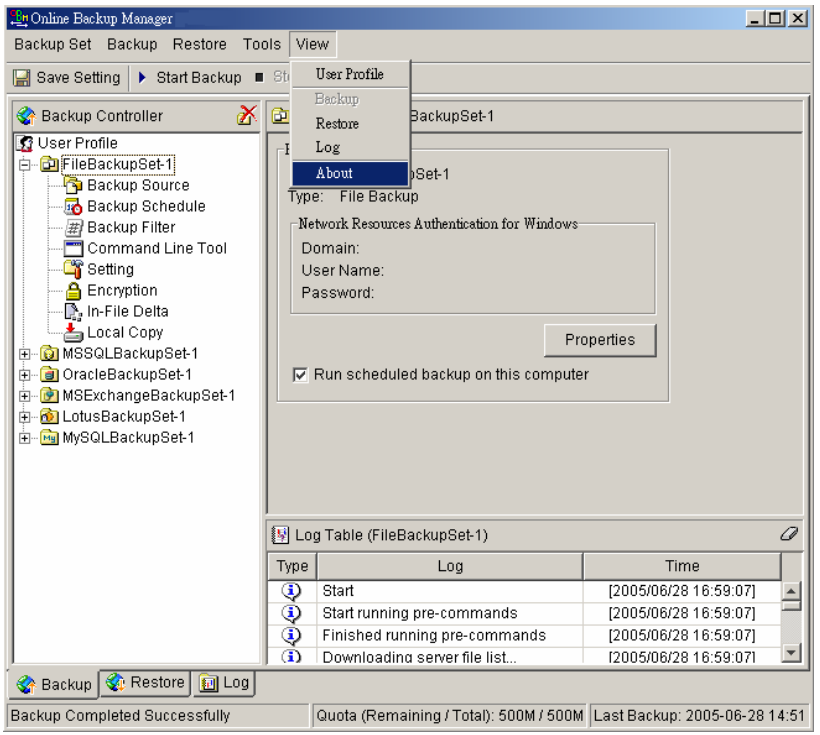
Please see if your question has already been answered in our FAQs available on our website.

15.2 Contact Us

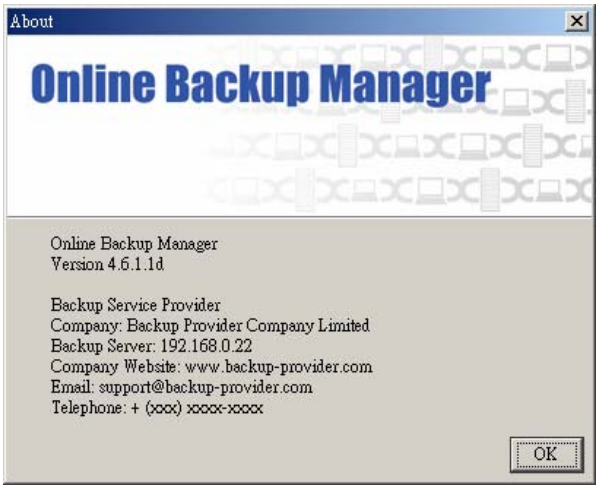
You can backup your data to an Databoks Offsite Backup Server by following instructions below.

i. Open DataboksOBM from the system tray

ii. Choose [View] -> [About] from the top menu



iii. Contact your backup service provider using the information shown in the [About] dialog box


About
Online Backup Manager
Online Backup Manager
Version 4.6.1.1d
Backup Service Provider
Company: Backup Provider Company Limited
Backup Server: 192.168.0.22
Company Website: www.backup-provider.com
Email: support@backup-provider.com
Telephone: + (xxx) xxxx-xxxx
OK